



Research Report
For
**Stop Painting/
InSITE Solutions, LLC**

Prepared by

Samantha Rife, Principal

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DRAFT #3 2/12/19

EXHIBIT 1

CONFIDENTIAL

Research Project: **Developing Timeline for Development of Floor Marking Tape Industry With Competitor Literature Analysis**

Investigator: Samantha Rife, Principal, SJR Research LLC

Prepared by: Samantha Rife

Statement of Purpose

This research report is designed to (1) examine the development of the floor marking tape industry prior, during and after Stop Painting/InSITE Solutions, LLC applied for its Superior Mark™ patent filed on April 22, 2005 and published on July 31, 2008; and (2) examine the competitor literature for major competitors such as ShieldMark, Ergomat, Creative Safety, Heskens, and Graphic Products.

Research Questions

This report examines two main research questions:

1. Prior to when Stop Painting/InSITE Solutions, LLC applied for its patent, where there any floor-tape or pressure-sensitive adhesives utilizing similar descriptive language in its ads, etc. that detailed such elements as a beveled/tapered edge, pallet drag, and any similar text relating to thickness such as the following: “a polymer layer having a Shore A Hardness of between 92 and 100 and a substantially uniform thickness of between about 0.020” to 0.065”; and a layer of adhesive attached to said polymer layer”?
2. Following the publishing of the patent by Stop Painting/InSITE Solutions, LLC did the competing floor-tape or pressure-sensitive adhesive producers utilize similar descriptive language in its ads, etc. that detailed such elements as a beveled/tapered edge, pallet drag, and any similar text relating to thickness such as the following: “a polymer layer having a Shore A Hardness of between 92 and 100 and a substantially uniform thickness of between about 0.020” to 0.065”; and a layer of adhesive attached to said polymer layer”?

Study Methodology

Several sources were consulted to discover the literature timeline. They included:

1. Industry/Trade Journals and publications such as:
 - a. *Adhesion adhesives & sealants; the trade journal for industrial adhesives & sealants*. Wiesbaden: Vieweg + Teubner, Springer Fachmedien Wiesbaden.
 - b. Impact Marketing Consultants, Inc. 1996-. *Adhesives & sealants industry: a market survey and analysis*. Manchester Center, VT.: Impact Marketing Consultants.
 - c. *Adhesives & sealants industry*. Troy, MI: Business News Pub. Co.

- d. *Coatings world*. 1996. Ramsey, NJ: Rodman Pub. Corp.
 - e. *Adhesives age*. [New York, N.Y]: [Chemical Week Associates].
 - f. *The Composites & adhesives newsletter*. Los Angeles: T/C Press.
 - g. Predicasts, inc. *Adhesives & specialty chemicals*. Cleveland: Predicasts, Inc.
 - h. *Reviews of adhesion and adhesives*. Beverly, MA: Scrivener Publishing, [2013]-
 - i. Satriana, M. J. *Adhesives technology annual*. Park Ridge - N.J: Noyes Data Corporation.
 - j. Rauch Associates. *The Rauch guide to the U.S. adhesives and sealants industry*. Bridgewater, N.J.: Rauch Associates.
 - k. Freedonia Group. n.d. *Pressure sensitive tapes*. Cleveland, Ohio: Freedonia Group.
2. Social media listings such as Facebook, Instagram, Twitter and LinkedIn.
 3. Patent applications.
 4. Patent litigation briefs.
 5. Newspapers.
 6. Trade show publications.
 7. Web Archive/Wayback Machine findings.
 8. Generic internet keyword searching.

Overall Research Findings

Patent Research

A patent keyword search was first completed to determine if any of the prior floor adhesive patents prior to 2005 mentioned beveling or tapering. Keywords such as (tape) (floor) (beveled) (adhesive) before:priority:20050422; (tape) (floor) (bevel) (adhesive) before:priority:20050422; (tape) (floor) (beveled) before:priority:20050422; (tape) (floor) (adhesive) before:priority:20050422, (tape) (floor) (tapered) (adhesive) before:priority:20050422, etc. were used with no instance of any previous instances of a floor marking tape having any beveled edges.

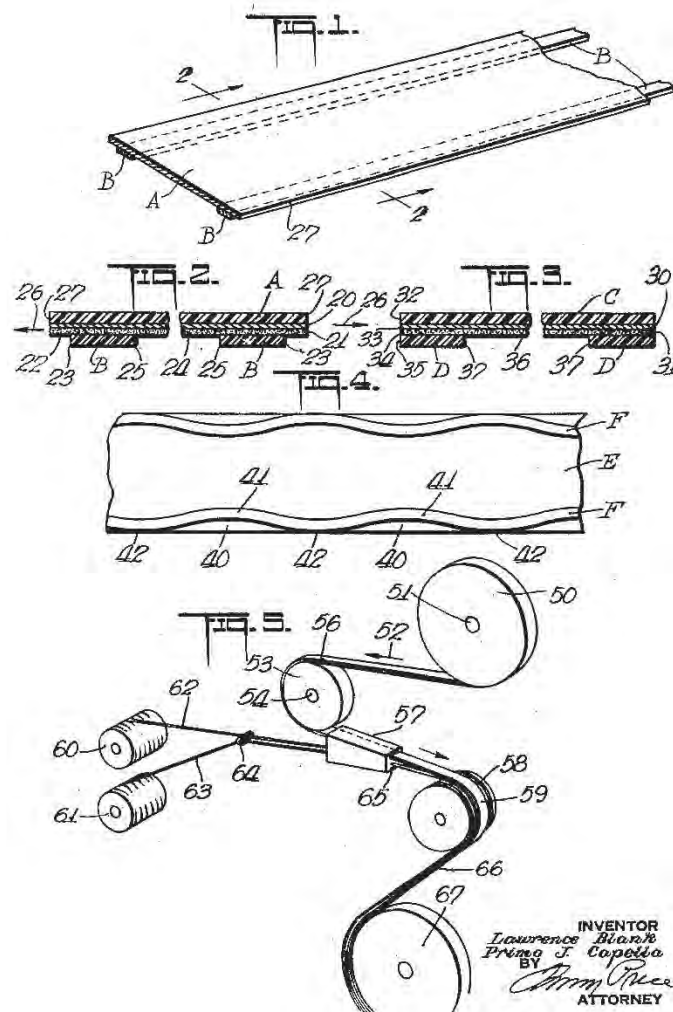
Prior to 2005, the following patent applications relating to floor marking tape or pressure sensitive tape were filed:

1949: Lawrence, Blank and Primo J Capella. Pressure Sensitive Tape. US Patent 2,673,643A, filed February 25, 1949.

March 30, 1954

L. BLANK ET AL
PRESSURE SENSITIVE TAPE
Filed Feb. 25, 1949

2,673,643

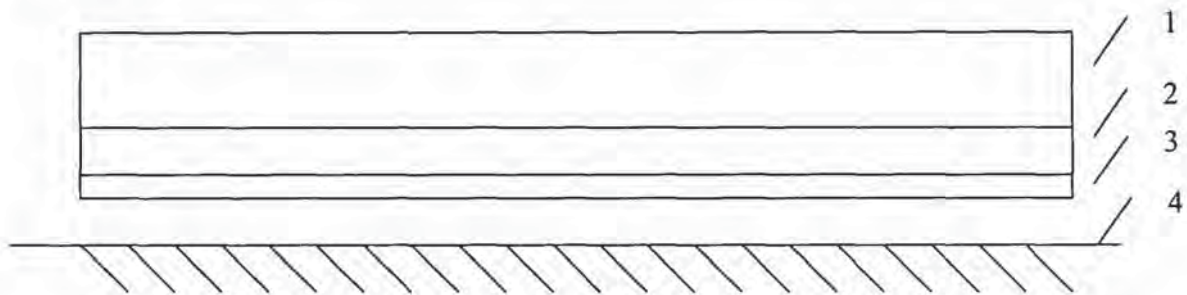


INVENTOR
Lawrence Blank
Primo J. Capella
BY
[Signature]
ATTORNEY

2003: Thomas R. Goecke. Adhesive Tape. US Patent 8,088,480B2, filed September 29, 2003.¹

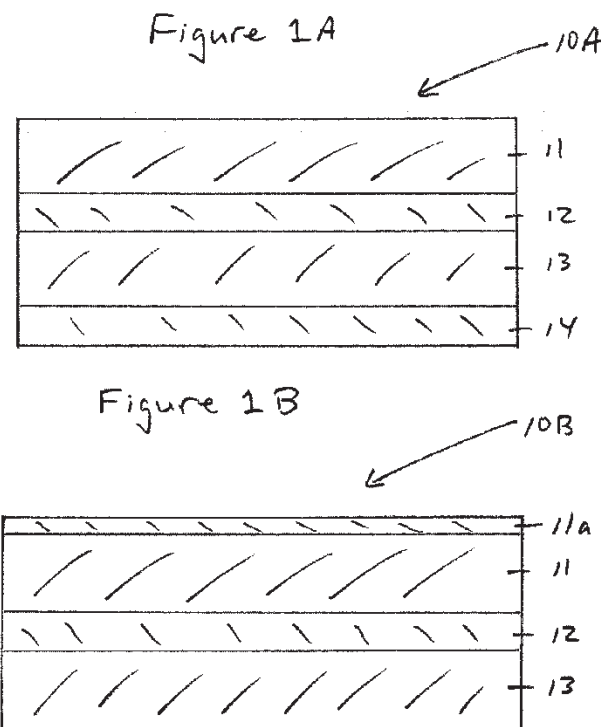
The adhesive tape of this application comprises a layer of polymeric material, particularly a polyvinyl chloride, having a Shore A Hardness of between 92 and 100 and a layer of adhesive material attached to a surface of the layer of polymeric material.

FIGURE 1



Following the 2005 patent application by Stop Painting/InSITE Solutions, the following similar patent application was filed for floor marking tape, etc.:

2009 - Savagian, Michael D. Steven H. Mess, and Matthew C. Cole. Floor Marking Tape. US Patent 12,620,297, filed November 17, 2009.



¹ The full 480 patent is at the end of this report.

None of these patents mention a beveled edge of any kind.

Following the patent search, a literature search was conducted regarding similar floor marking tapes for any images or textual references to beveled edges, pallet drag, and any similar text relating to thickness such as the following: “a polymer layer having a Shore A Hardness of between 92 and 100 and a substantially uniform thickness of between about 0.020” to 0.065”; and a layer of adhesive attached to said polymer layer”.

Creative Supply SafetyTac® Floor Tape:

2008: Oldest web-listing for SafetyTac on web archive. No direct mention of beveled edge.

Minimal indirect reference to pallet drag:

“SafetyTac™ Floor Marking Tape

SafetyTac™ floor marking supplies have changed how floor marking is done. The premium SafetyTac is 70 times thicker the 3M tape making a 2 year warranty possible many facility like NASA, AutoLiv, Proctor & Gamble and Smuckers find that putting down SafetyTac is a onetime quick and painless task.

SafetyTac™ is the most durable peel and stick floor marking product on the market and a superior alternative to painting your floor marking lines. All SafetyTac™ products carry a 2 year warranty replacing your tape a no charge. With no Fumes, no dry time, no cure time and no down time SafetyTac is a onetime floor marking tape that can handle forklift traffic and hold up to food processing plants.”

(21 Aug. 2008. Internet Archive.

<http://web.archive.org/web/20080821015217/http://safetytac.com/>)

2010: Mentions pallet drag in YouTube drag test video: “-SafetyTac is known today as one of the best industrial floor marking tapes ever created. Able to withstand the stress of high-pressure forklift traffic or even the abrasive action of a wood pallet scraping over it again and again. We created SafetyTac floor tape to outperform all other tapes and paints on the market, even under the harshest work environments. Whether it's a chemical, solvent or grease spill, heavy forklift traffic, or pallet wear and tear, SafetyTac floor tape will stand strong. And when it comes to cleaning our SafetyTac tape really shines - pun intended. Because the surface is made of non-porous, high-end 21st century materials, the floor marking tape is easy to clean and keep clean. Unlike painted floor stripes, that are hard to keep clean as the paint surface breaks down, SafetyTac will remain fresh and new looking for several years. And we ought to know - we manufacture it and have for several years now. SafetyTac has become a leader in industrial floor marking and aisle marking tapes. Call 1-866-777-1360 or visit

<http://www.creativesafetysupply.com/c...>”

(“New Industrial Floor Tape - SafetyTac Drag Test,” YouTube video, 1:12, posted by "SafetyTac Floor Tapes," June 4, 2010, <https://www.youtube.com/watch?v=N0cJOKOcrC4>.)

2011: Mentions beveled edge on SafetyTac web page:



(7 Feb. 2011. Internet Archive.

<http://web.archive.org/web/20110207230500/http://safetytac.com/>)

Mentions pallet drag in YouTube drag test video as seen in below screen capture



SafetyTac Floor Tape Durability Test - 5SToday.com - 866-402-4776

396 views

0 0 SHARE SAVE ...

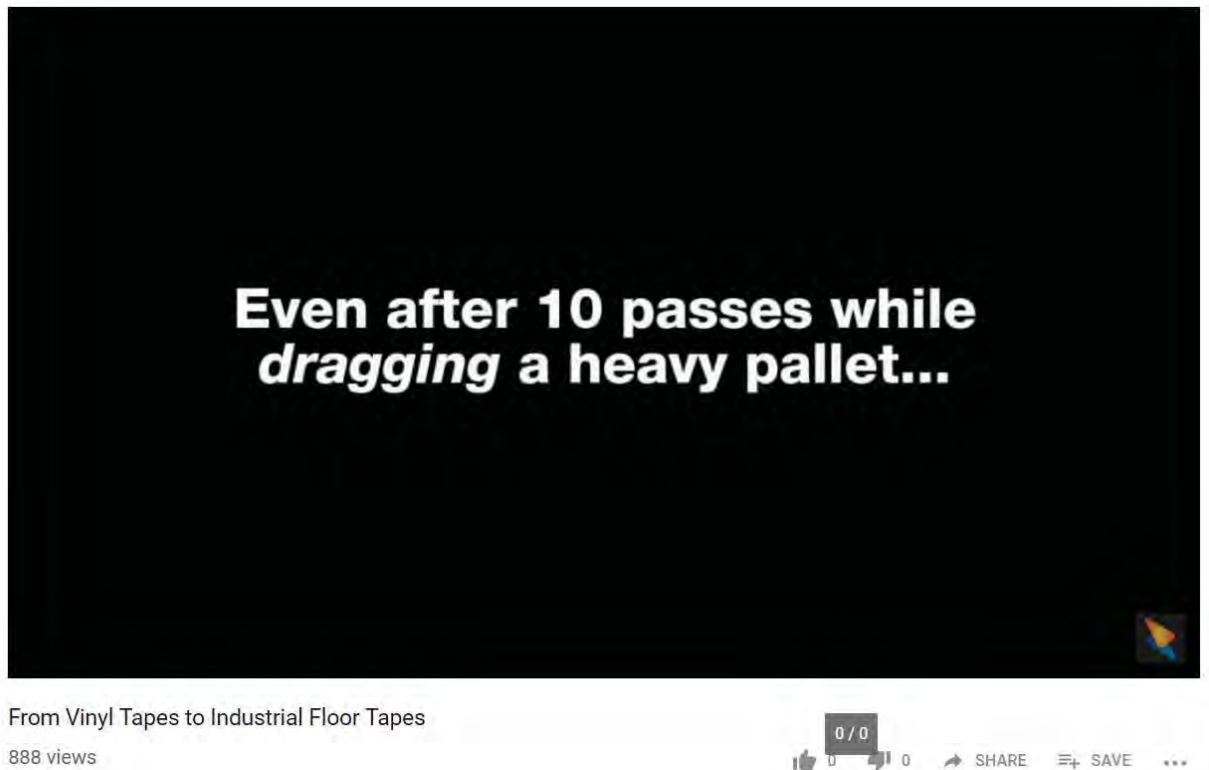
("SafetyTac Floor Tape Durability Test," YouTube video, 1:06, posted by "5SToday," February 3, 2011, <https://www.youtube.com/watch?v=zbLMTsshzE8>.)

2012: Shows brief reference to pallet drag in YouTube video:
("Warehouse Floor Tape using SafetyTac Industrial marking tapes," YouTube video, 2:41,
posted by "Creative Safety Supply," September 20, 2012,
<https://www.youtube.com/watch?v=fAAcPjbOPQc>.)

Mentions beveled edge in this YouTube video as seen in this screen capture:



Also, mentions pallet drag as seen in this screen capture:



("From Vinyl Tapes to Industrial Floor Tapes," YouTube video, 1:38, posted by "Creative Safety Supply," October 12, 2012, <https://www.youtube.com/watch?v=mDSHTySPKdw>.)

Mentions tapered edge and alludes lightly to pallet drag on web-site:

explore captures for this URL

Home Shipping & Returns Contact Us Installation Instructions How To Videos

Categories

- SafetyTac Tape
- SafetyTac EDGE
- SafetyTac Hazard Tape
- SafetyTac Lean
- SafetyTac Shapes
- Smart Stripe Tape
- Tape Applicator

New Products:

- SafetyTac Xs 25 pack
\$50.00
[Choose Options](#)
- SafetyTac Square Ts 25 pack
\$50.00
[Choose Options](#)
- SafetyTac Floor Tape Applicator
\$999.00
[Add To Cart](#)
- SafetyTac EDGE
\$105.00
[Choose Options](#)
- Smart Stripe Tape
\$19.95
[Choose Options](#)

Our Newsletter


Your First Name:

Your Email Address:

[SUBSCRIBE ME](#)

Home > [SafetyTac Tape](#) > SafetyTac Lean
Home > [SafetyTac Lean](#) > SafetyTac Lean

SafetyTac Lean



SAFETYTAC LEAN

Price: \$65.00

Shipping: Calculated at checkout

* **Color:** -- Please Choose an Option -- ▾

* **Size:** -- Please Choose an Option -- ▾

Quantity: 1 ▾ [ADD TO CART](#)

Related Products

- SafetyTac Rounded Corners 25 pack
\$50.00
- SafetyTac Square Corners 25 pack
\$50.00
- SafetyTac Dots
\$50.00
- SafetyTac Footprints 25 pack
\$50.00
- SafetyTac Hazard Tape
\$149.00

Product Description

SafetyTac LEAN - 100' per roll in 2", 3", & 4" Widths

Super THIN meets Super STRONG

Made from the same Super Strong Material as SafetyTac, with a thinner, lower profile.

- SafetyTac Lean's thin profile and strong clear rubber based adhesive make it the perfect choice for any facility with medium / moderate traffic. Including some forklift traffic.
- Double tapered edge allows carts and traffic to glide over it like it's not even there.
- SafetyTac Lean removes with out leaving a residue.
- Exceptional resistance to facility traffic, water, oils, greases and most other chemicals.
- SafetyTac LEAN is 40% thinner than other Industrial Floor Marking Tapes, yet will out perform them in most all cases.
- It's thin profile and super strong material makes it one of the best floor tapes on the market today.
- A lot stronger than any vinyl tape.
- Easy peel and stick application. Will not stretch or curl when applying it.

[Download Product Info & Pricing](#)

(16 Jan. 2012. Internet Archive.

<http://web.archive.org/web/20120116021343/http://www.safetytac.com/products/SafetyTac-Lean.html>)

2013: Mentions tapered edge in 2013 video on YouTube as seen below in this screen capture:



Likewise, mentions pallet drag as well.

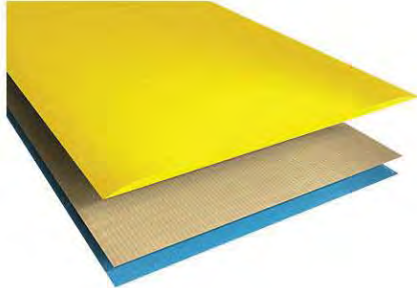
("Floor Tape Product Spotlight - SafetyTac," YouTube video, 3:20, posted by "SafetyTac Floor Tapes," October 1, 2013, <https://www.youtube.com/watch?v=gGmICbzuZRc>.)

2014: Mentions both pallet wear and dual beveled edge on web-site description:

Guaranteed performance.

We created SafetyTac floor tape to outperform all other tapes and paints on the market, even under the harshest work environments. Whether it's a chemical or grease spill, heavy forklift traffic, or pallet wear and tear, SafetyTac floor tape will stand strong.

[See SafetyTac floor tape in action >](#)



Designed to last.

SafetyTac floor tape is created using only the toughest material available. With a super sticky adhesive backing and the added convenience of dual-beveled edges, SafetyTac floor tape is built to last. The resilient surface keeps it looking new for years, keeping your floors safe and professional looking.

[Learn more about SafetyTac materials and adhesives >](#)

(25 Jun. 2014. Internet Archive.

<http://web.archive.org/web/20140625054638/http://www.safetytac.com/>)






IDEAL APPLICATIONS:

- WAREHOUSE FLOORS
- MANUFACTURING FLOORS
- FORKLIFT LANES
- AISLE MARKING
- SHIPPING LANES
- SAFETY BOUNDARIES
- WORK AREA DIVISION
- SS FLOOR MARKING
- PALLET ALIGNMENT

RECOMMENDED FOR:
FOOT TRAFFIC TO
HEAVY FORKLIFT AND TRUCK
TRAFFIC



MORE INFO:
(866) 777-1360
info@creativesafety.com
www.creativesafety.com

SAFETYTAC

The days of using paint to mark aisles, pathways, and safety lanes are over! Industrial floor tapes are now widely regarded by both large and small companies alike to be the most effective, longest-lasting method for marking their warehouses and manufacturing floors.

SafetyTac is our #1 top selling floor tape, and for good reason: it's designed to outperform paint in even the harshest industrial environments!

Our customers put SafetyTac through the toughest tests on a daily basis- forklifts, trucks, heavy foot traffic, chemicals, greases, pallets- you name it- SafetyTac takes it all without blinking an eye, thanks to its tough material and adhesive, and dual-beveled edges.

Installing SafetyTac could not be easier- Simply peel back the liner and apply it to a clean dry surface. Once it's down, just run over the tape with a tamper cart or forklift, and you're done! No longer do you have to have to shut down areas while you wait for paint to dry, or use valuable employee man-hours fooling around with messy paints in the first place.

Available Widths	2", 3", 4", 6"
Roll Length	100' per roll
Tape Thickness	33 mil (1 mil = 1/1000")
Manufacturer	Creative Safety Supply
Country of Origin	USA
Application	Facility, Safety & Maintenance, Identification, General & Industrial Labeling, etc.
Rated for	All levels of traffic

Available Colors



Also Available in SafetyTac Material:



(16 Jun. 2014. Internet Archive.

<http://web.archive.org/web/20140716172921/http://www.safetytac.com/content/SafetyTac-Info-Pricing.pdf>)

2016: See a mention of tapered/beveled edges in 2016 in the product description on their website as seen in the below screen captures:



THE TOUGHEST FLOOR MARKING TAPE EVER.

SAFETYTAC® 2.0

Introducing SafetyTac® 2.0 with ARMOR Technology

TOUGH	SafetyTac® 2.0 is engineered from a rigid composite material and extra-strong adhesive, making it extremely resistant to forklifts and other industrial traffic.
LOW PROFILE	Featuring a low profile and dual beveled edges, SafetyTac® 2.0 allows small-wheeled carts and foot traffic to pass over lines with ease and without presenting any tripping hazards.
7 COLORS	Available in 7 bold, OSHA-standard colors: Yellow, White, Black, Red, Green, Orange, and Blue.

Learn more about SafetyTac® Floor Tapes- visit creativesafety.com or call us today for free samples at 1-866-777-1360

CREATIVE safety supply

Product Description

SafetyTac® Floor Marking Tape

- Dual-stage tapered edges
- Low profile
- Industrial strength material and reinforced rubber-based adhesive
- Easy to apply by hand or with optional SafetyTac® applicator (ST-APPL)
- 1-year limited warranty

Safety Tac® Floor Tape is our best-selling [floor marking tape](#), and for good reason. Safety Tac® floor marking tape is designed to withstand the tough conditions of an industrial workplace. Safety Tac®'s resilient material holds up to traffic and spills, and its reinforced rubber-based adhesive keeps it in place, so it will get the job done for a long time. Safety Tac®'s dual stage tapered edges prevent the tape from getting caught on wheels or pallets. That means vehicles can easily slide over the tape without causing damage. Safety Tac® also has a low profile, so it won't make walking surfaces uneven. No need to worry about pedestrians tripping.

Features



Dual Stage Tapered Edges

Tapered edges allow carts and pallets to easily slide over this tape. You can move objects without worrying they will catch the tape's edge.



Low Profile

Safety Tac®'s low profile allows it to sit smoothly on your floors, so it will not create a tripping hazard.



Industrial Strength

Safety Tac® can withstand the tough conditions of an industrial workplace. It will hold up to traffic, wet conditions, and even chemical spills.

(24 Mar. 2016. Internet Archive.

<http://web.archive.org/web/20160324222410/https://www.creativesafety.com/safetytac-floor-tape/>)

Mentions beveled edge, thickness, and drag in this product description on web-page:

“Description

SafetyTac® floor marking tape is designed to withstand the tough conditions of an industrial workplace. SafetyTac®'s resilient material holds up to traffic and spills, and its reinforced rubber-based adhesive keeps it in place, so it will get the job done for a long time. SafetyTac®'s dual-stage tapered edges prevent the tape from getting caught on wheels or pallets. That means vehicles can easily slide over the tape without causing damage. SafetyTac® also has a low profile, so it won't make walking surfaces uneven. No need to worry about pedestrians tripping.

Installing SafetyTac® is as easy as peel and stick. Just remove the backing and press it to the floor. Unlike paint, SafetyTac® floor marking tape requires no dry time. Rolls of SafetyTac® are 100 feet long, so you can install long stretches of tape at a time. Select from 10 colors to create the floor marking system you need.

Features

DUAL-STAGE TAPERED EDGES

Tapered edges allow carts and pallets to easily slide over this tape. You can move objects without worrying they will catch the tape's edge.

LOW PROFILE

SafetyTac®'s low profile allows it to sit smoothly on your floors, so it will not create a tripping hazard.

INDUSTRIAL STRENGTH

SafetyTac® can withstand the tough conditions of an industrial workplace. It will hold up to foot and vehicle traffic, wet conditions, and even chemical spills.

EASY TO INSTALL

Applying SafetyTac® tape to the floor is simple. Remove the backing, lay the tape on the floor, and press it down. No dry time required.

Specifications

Thickness 35 mil wear-resistant rigid PVC

Edge Dual-stage beveled edge

Surface Smooth, slip-resistant finish for easy cleaning

Material Made from rigid Shore D80 material

Adhesive Extremely durable dual-sided cloth adhesive

Adhesive Color White

Liner Color Blue

Peel Strength 14 N/25 mm

Tensile Strength 80 N/25 mm

Application Temperature 40°F to 90°F

Service Temperature 0°F to 130°F

Warranty 1 year limited Details >”

(8 Mar. 2016. Internet Archive.

<http://web.archive.org/web/20160308173632/http://safetytac.com/safetytac>)

Warranty also mentions pallet drag:

“Warranty

SafetyTac Warranty Policy

Here at Creative Safety Supply, we stand behind our SafetyTac Industrial Floor Tape with a 5 Year Warranty.

Our guarantee is this: As long as the tape is properly installed and maintained, it will remain effective for a minimum of five years, or we will replace it for free.

SafetyTac is guaranteed to ship without manufacturer defects. If the SafetyTac you receive is defective at the time you receive it, immediately contact our Customer Service at 1-888-246-6770 during open office hours (Monday thru Friday, 6AM - 3:30PM Pacific Time) and our team will ensure that you receive a replacement.

For full warranty coverage to be in effect, SafetyTac must be applied to a clean, dry floor. The floor surface must be uniform, free of pits or grooves, and above 45 degrees fahrenheit during installation. As well, SafetyTac must be properly tamped to the floor surface with at least 250 pounds of downward pressure, and allowed to dwell without any traffic for one hour to ensure maximum adhesion.

For a copy of the SafetyTac installation procedure, please review our installation guide here: Installation Instructions

The following situations are not covered under warranty:

Damage caused by dragging pallets, skids, equipment, or similar items over SafetyTac
Physical damage of the tape (cutting, scraping, burning, etc.), either deliberate or accidental
Acts of nature or weather

Not following the installation instructions

All warranty claims are evaluated on a case-by-case basis. As part of our warranty claims process, we may ask you for photos of any/all affected areas where SafetyTac has failed. This not only helps us evaluate your claim, but helps us know how we can better develop the product. Most warranty claims are handled within 48 hours, but can take longer depending on the issue.

In no event is Creative Safety Supply, LLC liable for incidental or consequential damages of any kind or nature whatsoever as a result of purchasing or using SafetyTac. By purchasing SafetyTac, you agree that Creative Safety Supply's liability to you on any claim will not exceed the purchase price.

If you have any warranty questions, or need to file a warranty claim, please contact our Customer Service staff at 1-888-246-6770 during open office hours (Monday thru Friday, 6AM - 3:30PM Pacific Time)”

(23 Mar. 2016. Internet Archive.

<http://web.archive.org/web/20160323224046/http://www.safetytac.com/warranty/>)

2017: Mentions pallet drag in YouTube video:



SafetyTac® Industrial Floor Tapes: The Toughest Floor Tapes on the Planet

2,710 views

6 2 SHARE SAVE ...

("SafetyTac® Industrial Floor Tapes: The Toughest Floor Tapes on the Planet," YouTube video, 2:08, posted by "Creative Safety Supply," August 2, 2017, https://www.youtube.com/watch?v=nnJ_7CHYISw&feature=youtu.be.)

2019: Current product language on SafetyTac web-site

SafetyTac® floor marking tape is designed to withstand the tough conditions of an industrial workplace. SafetyTac®'s resilient material holds up to traffic and spills, and its reinforced rubber-based adhesive keeps it in place. SafetyTac®'s dual-stage tapered edges prevent the tape from getting caught on wheels or pallets. That means vehicles can easily slide over the tape without causing damage. SafetyTac® also has a low profile, so it won't make walking surfaces uneven, or create an unintended tripping hazard.

Installing SafetyTac® is as easy as peel and stick. Just remove the backing and press it to the floor. Unlike paint, SafetyTac® floor marking tape requires no dry time. Rolls of SafetyTac® are 100 feet long, so you can install long stretches of tape at a time. Select from 10 colors to create the floor marking system you need.

Features

Dual-stage Tapered Edges

Tapered edges allow carts and pallets to easily slide over this tape. You can move objects without worrying they will catch the tape's edge.

Low Profile

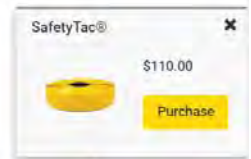
SafetyTac®'s low profile allows it to sit smoothly on your floors, so it will not create a tripping hazard.

Industrial Strength

SafetyTac® can withstand the tough conditions of an industrial workplace. It will hold up to foot and vehicle traffic, wet conditions, and even chemical spills.

Easy to Install

Applying SafetyTac® tape to the floor is simple. Remove the backing, lay the tape on the floor, and press it down. No dry time required.



(“SafetyTac,” Last Updated 23 Dec. 2016. PermaStripe web page. Accessed 11 February 2019.
<https://www.safetytac.com/safetytac/>.)

ShieldMark MightyLine Floor Tape:

With the MightyLine Floor Tape literature/ads/marketing you first see mention of beveled edges and pallet drag in late 2007

2007: No mention of beveled edge or pallet drag or thickness specifications until late 2007



We're on a roll...

MIGHTYLINE™

The Original Durable Stripe

MightyLine™ and MightyGlow™ are durable peel and stick aisle-way striping products that are superior alternatives to painted floor lines in industrial facilities.

With our easy-on applicator and limited 3-year warranty, MightyLine and MightyGlow are smart, economical choices that are easy to install, maintain and remove.

Our experienced network of nationwide manufacturer representatives are instrumental in making our line of products available to wholesale dealers nationwide.

Home
MightyLine
MightyGlow
WhatsNew
Cost_Justify
ContactUs

MightyLine products are Patent Pending
ShieldMark, Inc.
800-714-9980
admin@mightyline.net

© Copyright 2006 Shieldmark, Inc. All Rights Reserved. MightyLine products are Patent Pending.

MIGHTYLINE™

The Original Durable Stripe



Home

MightyLine

MightyGlow

WhatsNew

Cost_Justify

ContactUs

MightyLine™ superior striping system. Terrific value.

Standard MightyLine
Our high-strength, double-coated tape features a removable pressure sensitive rubber-based adhesive. It delivers immediate quick stick, yet allows for removal without leaving residue.

Permanent MightyLine
Our high-strength, double-coated tape features a permanent pressure sensitive, acrylic-based adhesive. Once applied in room temperature environments, this tape will remain anchored in sub-zero temperatures, such as unheated warehouses. It is also ideal for wet-floor environments where the floor lines are submerged in water for prolonged periods.

Wide choice of colors and widths

- Available in 6", 4", 3" and 2" sizes.
- Seven standard colors: red, white, blue, black, yellow, orange and green. Custom choices include yellow, orange or red with a contrasting center line color.
- We can match your corporate colors with a 24-roll order.
- Ask about our special orders for extra-length rolls.





Click here
to see
applicator
in action!

Better than painted lines

- No more smelly fumes and messy paint. Now you can easily install MightyLine, a superior and economical alternative to strip painting.
- Our products can be installed with or without our custom applicator, which can be rented or purchased. With our easy-on applicator, 1,500 feet of aisle-way lines can be installed in an hour.

Click on the brochure to read or print the MightyLine information sheet.



MightyLine products are Patent Pending

ShieldMark, Inc.

800-714-9980

admin@mightyline.net

(28 Mar. 2007. Internet Archive.

<http://web.archive.org/web/20070328225426/http://mightyline.net/Pages/MightyLine.html>.)

Beveled edge is seen here and mentions pallet drag.

MightyLine Dots



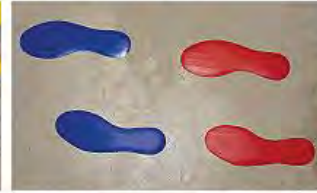
Use MightyLine Dots in areas where skids are pushed across marked floors making maintenance and replacement easier.

MightyLine Angles and T's



MightyLine Angles and T's aid in marking the proper placement of equipment, tools, vehicles, pallets and other items on your floor.

MightyLine Footprints



Keep pedestrians out of harm's way by identifying walkways with MightyLine Footprints. Add more security with MightyGlow Footprints.

MightyLine/MightyGlow ATTRIBUTES	MightyLine/MightyGlow BENEFITS
Peel & Stick	Labor saving quick and easy installation
Special Adhesive	Leaves little adhesive residue upon tape removal
.040 Thick Special Polymer	Will not wear away like competitive floor tapes
Beveled Edge	Inhibits chipping from forklift traffic
7 Standard Colors	Conform with your own color coding requirements
MightyGlow Glow-in-the-Dark Center Stripe	Provides safe exit path during power failures
Custom Applicator	Speeds up your installation process



Our products can be installed with or without our Custom Applicator, which can be rented or purchased. With our easy-on applicator, 1,500 feet or aisle way lines can be installed in an hour.

Click on the applicator image to see it in action!

ShieldMark, Inc.
800-714-9980
admin@mightyline.net

© Copyright 2006 Shieldmark, Inc. All Rights Reserved.

MightyLine products are Patent Pending.

(28 Dec. 2007. Internet Archive.

<http://web.archive.org/web/20071228061950/http://www.mightyline.net:80/Pages/MightyLine.html>)

2008: The attributes and benefits specifications no longer appear on same web-page in 2008 and this continues on web-site language until until you see language such as beveled edge and pallet drag on 2015 literature and on web-site

HOME

MIGHTYLINE

MIGHTYGLOW

VISUAL AID

WHAT'S NEW

COST JUSTIFY

NEWS


CONTACT US

Mighty Line Superior Striping System.

A Terrific Value.

Our high-strength, double-coated tape features a removable pressure sensitive rubber-based adhesive. It delivers immediate quick stick, yet allows for removal without leaving residue.

Tape Widths	Colors Available	Two-Color 4" Tape	Styles
2"	Yellow	4" Wide Yellow w/Glow-in-the-Dark Ctr Line	
3"	Orange	4" Wide Red w/Glow-in-the-Dark Center Line	
4"	Red	4" Wide Orange w/Blue Center Line	
6"	White	4" Wide Yellow w/Blue Center Line	
	Blue	4" Wide Red w/White Center Line	
	Green	4" Wide Yellow w/Black Center Line	
	Black		
	Brown		
	Gray		
	Yellow w/Black Chevrons		
	White w/Black Chevrons		
	White w/Red Chevrons		
	Yellow w/Black Checkerboard		
	White w/Black Checkerboard		





Our products can be installed with or without our Custom Applicator, which can be rented or purchased. With our easy-on applicator, 1,500 feet or aisle way lines can be installed in an hour.

Click on the applicator image to see it in action!

(5 Sep. 2008. Internet Archive.

<http://web.archive.org/web/20080905131600/http://www.mightyline.net/Pages/MightyLine.html>
)

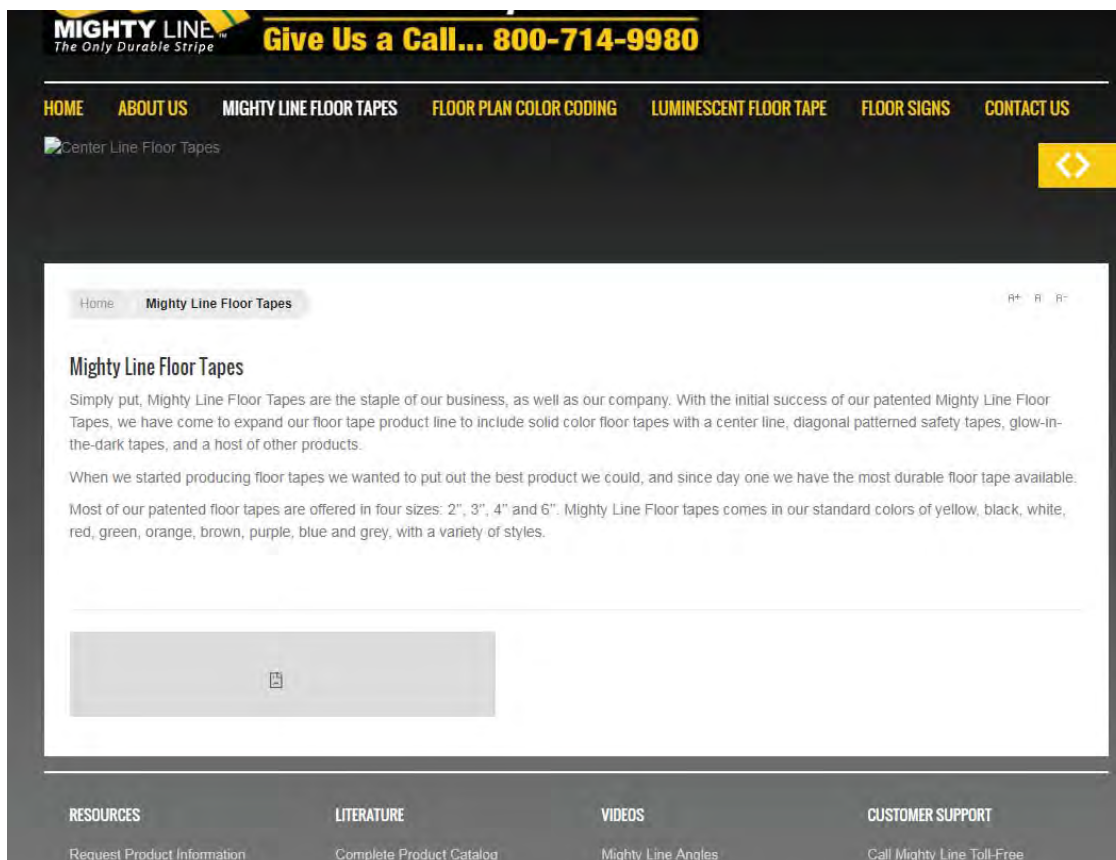
2012: MightyLine talks about a major competitors tape test –



(4 Jan. 2012. Internet Archive.

<http://web.archive.org/web/20120104040907/http://www.mightyline.net:80/Pages/MightyCompetition.html>)

2013: Continues no mention of language such as beveled edge and pallet drag on web-site



(25 Jan. 2013. Internet Archive.

<http://web.archive.org/web/20130125053534/http://www.mightyline.net/mighty-line-floor-tapes.html>)

SHIELDMARK: Floor Tapes



May 12, 2014

KEYWORDS tapes
Reprints



No Comments



The patented Mighty Line floor tapes (US 8,088,480 B2) and other floor marker products are intended to help managers make their facilities safer, more organized and productive. The easy-to-apply floor marking products can reportedly outperform alternatives such as painting and thinner, shorter-lasting floor tapes.

The product line offers benefits including quick application, long life, and critical safety warning messages. In addition, the tapes can provide non-invasive installation and removal, and can be cleaned with industrial brush scrubbers.

For more information, visit www.mightyline.net.



(2014 ad in Adhesives and Sealants Industry Magazine. No mention of beveled edge or pallet drag. <http://www.adhesivesmag.com/articles/92899-shieldmark-floor-tapes>)

2015: Mention of pallet drag in 2015 catalog. No mention of bevel

MIGHTY LINE' FLOOR TAPE PRODUCTS

Whose Tape is Tougher?

Competitor's Tape

Mighty Line Tape

Benefits of Mighty Line!

- Separating pedestrian traffic from motorized vehicles.
- Illuminating walkways during power failures.
- 5S lean manufacturing improvements.
- Color code different areas with specific color tapes.
- Easy to install and lasts!
- 3 year limited warranty.

Mighty Line tape and a major competitor's tape side by side in an aggressive test area frequently traveled by forklifts carrying heavy loads. Notice the major gouges and flaws in our competitor's tape.

Mighty Line vs. Painting

Painting Disadvantages	Mighty Line Advantages

Mighty Line Patented Floor Tape

Mighty Line patented floor tape is available in many colors, widths, and styles. Patent No. US 8,088,480.

MIGHTY LINE
The Only Sure-to-Last Floor Tape

3

(ShieldMark, Inc., "MightyLine Floor Tape 2015 Catalog," 23 Nov 2015. ShieldMark Inc. LinkedIn SlideShare page. Accessed 5 February 2019.
https://www.slideshare.net/MightyLineFloorTape/mighty-line-floor-tape-2015-catalog-55423071?from_action=save)

2016: Mention of beveled edge and thickness

- FREEZER TAPE
- REFLECTIVE TAPE
- BRICK TAPE
- = ALL FLOOR SIGNS
 - ALL FLOOR SIGNS
- = ANGLES
 - 2 INCH
 - 3 INCH
- = T'S
 - 2 INCH
 - 3 INCH
- = DOTS
 - 0.75 INCH
 - 1 INCH
 - 2.7 INCH
 - 3.5 INCH
 - 3.75 INCH
 - 5.7 INCH
- = SEGMENTS
 - 2" SEGMENTS
 - 3" SEGMENTS
 - 4" SEGMENTS
 - 6" SEGMENTS
- = ARROWS
 - REGULAR
- = FOOTPRINTS
 - REGULAR
 - BIG FEET
- = RACK PROTECTION

Mighty Line floor tape has a peel and stick adhesive and removes cleanly upon removal.

What Makes Mighty Line Floor Tape Different?

Sort by Featured

(ShieldMark, Inc., "Stop painting and use heavy duty floor tape," 8 Jul. 2016. ShieldMark Inc. LinkedIn SlideShare page. Accessed 5 February 2019.
<https://www.slideshare.net/MightyLineFloorTape/stop-painting-and-use-heavy-duty-floor-tape>)

This image is also shown in a YouTube video which mentions beveled edge and drag
 ("Mighty Line Safety Floor Tape Installation Instructions," YouTube video, 1:09, posted by "Mighty Line Floor Tape," November 30, 2016,
https://www.youtube.com/watch?v=jv_H7hMePkY.)

2019: Current product language for Mighty Line

Benefits of Mighty Line Floor Tape:

- Mighty Line's peel-and-stick adhesive leaves no residue when removed.
- Mighty Line floor tape is thick, tough, and the special Mighty Line formula helps resist abrasion.
- Ability to change workflow area quickly and easily.
- Mighty Line floor tape is 50 mil thick with beveled edges
- Mighty Line floor tape withstands industrial brush scrubbers, forklifts, and heavy industrial wheel traffic.
- No downtime associated with paint
- Faster to install than paint
- Mighty Line widths: 2,3,4 and 6 inch
- Mighty Line lengths: **100 feet** for all tapes except reflective floor tape
- Solid Colors: **Yellow, White, Orange, Blue, Red, Green, Black, Brown, Grey and Purple** available in Mighty Line floor tape.
- Mighty Line floor tape is patented and **Proudly Made in the USA**
- Mighty Line has the leading manufacturers limited 3-year warranty.
- HS Tariff Code: 3919102055

What Makes Mighty Line Floor Tape Different?



(“MightyLine,” Last Updated 1 May 2018. MightyLine web page. Accessed 11 February 2019. <https://mightylinetape.com/collections/industrial-safety-floor-tape-solid>.)

ErgoMat DuraStripe:

2003: Mentions scuff resistant in literature and web-site

DURA STRIPE®

Economical Aisle Striping That Lasts

DuraStripe is the flexible new aisle striping system that is applied like tape and outlasts any other commonly used system.

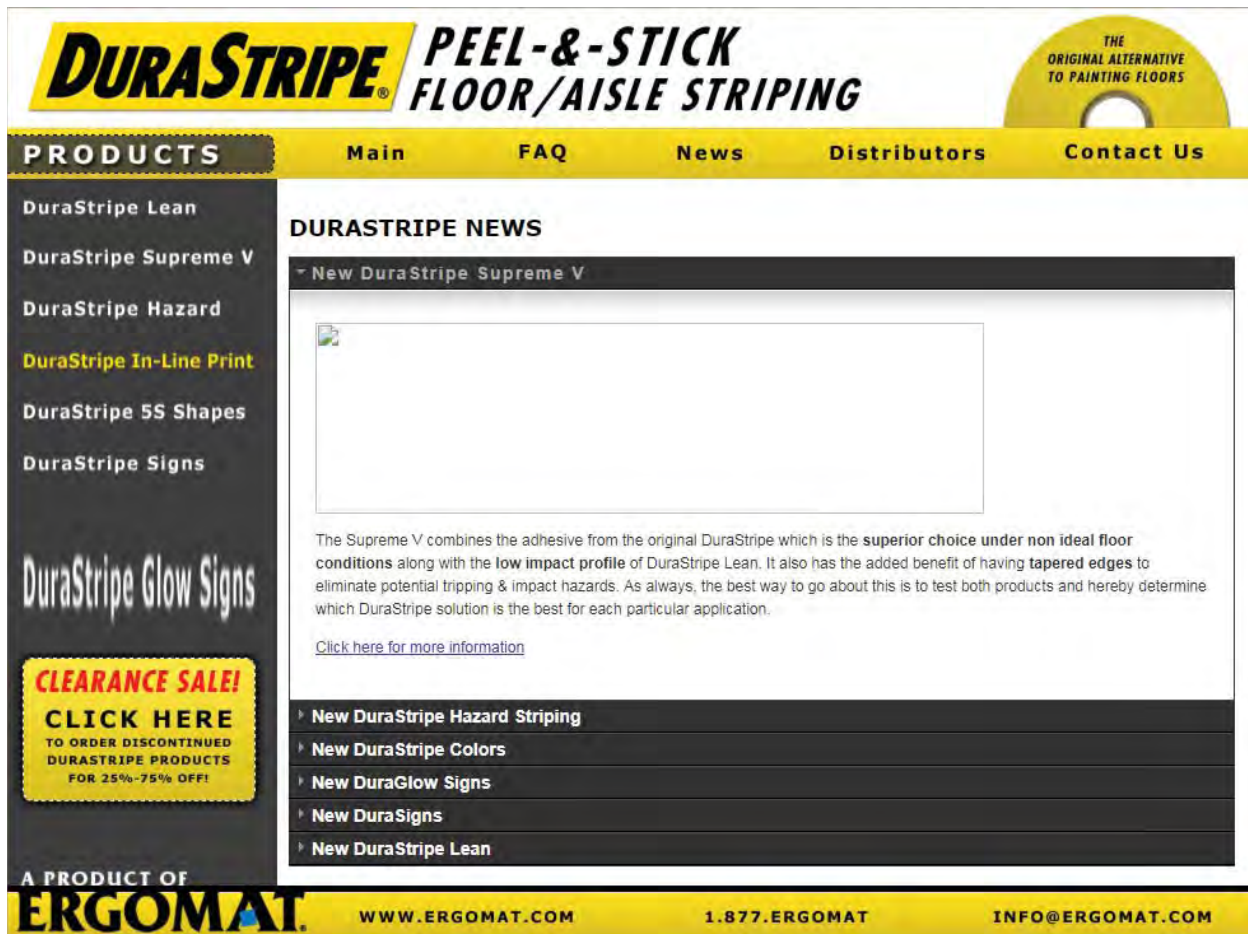
- Installs quickly and easily
- Eliminates the downtime associated with stripe painting
- Scuff resistant material requires little or no maintenance
- Backed by a 2 year warranty
- Stored in yellow, red, green, blue and orange; custom colors also available
- Sold in 100 foot rolls – 2" and 4" widths

Another quality product from **ERGOMAT®**

(21 Aug. 2003. Internet Archive.

<http://web.archive.org/web/20030821120323/http://www.durastripe.com/durasell.pdf>)

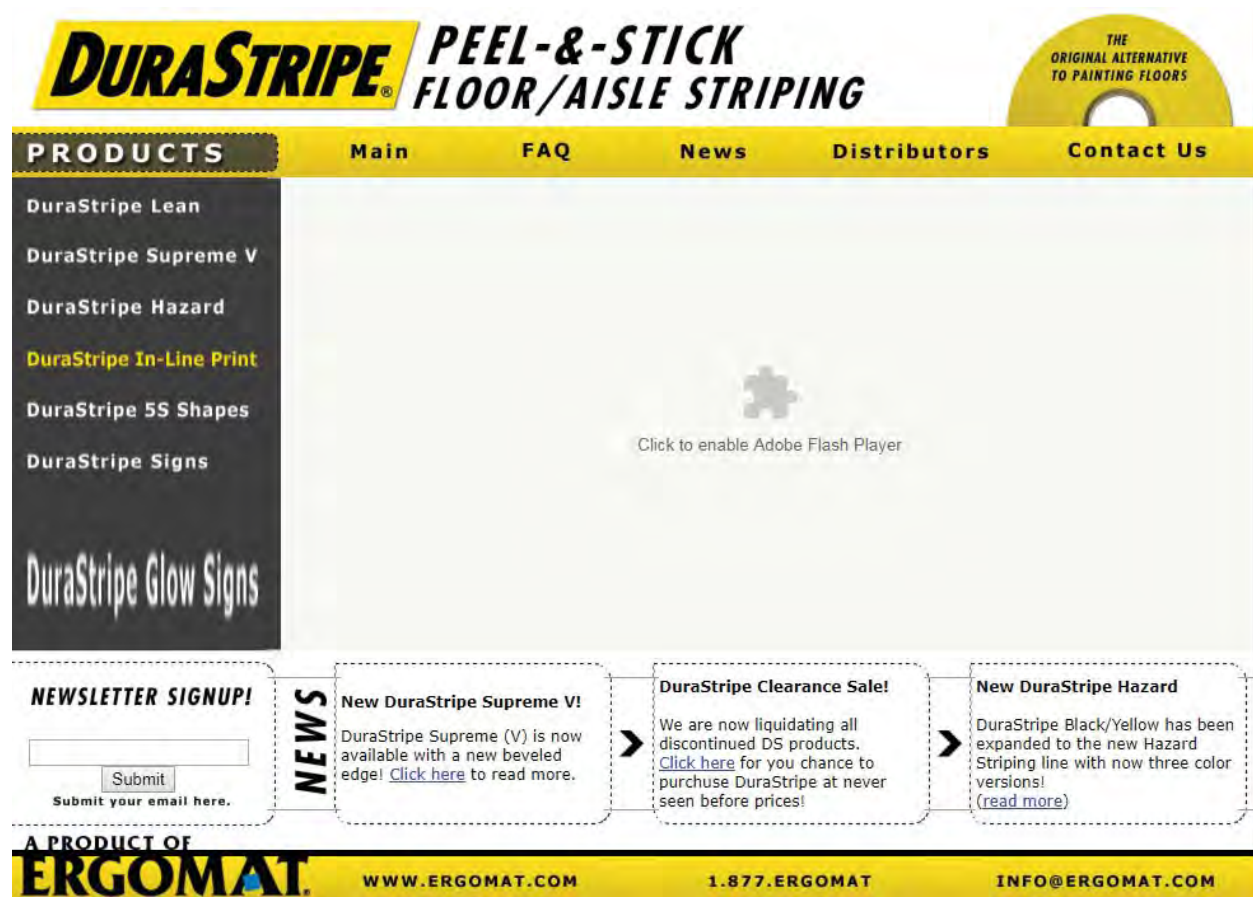
2009: “it has the added benefit of having tapered edges”



(19 Jul. 2009. Internet Archive.


<http://web.archive.org/web/20090719074739/http://www.durastripe.com:80/news.html>)

“now available with a new beveled edge”



(5 May 2009. Internet Archive.

<http://web.archive.org/web/20090505005123/http://durastripe.com:80/>)

2019: Current product language for DuraStripe


DURASTRIPE XTREME ROLLS

[SPEC SHEET](#) [CLEANING INSTRUCTIONS](#)

WARRANTY INFO
2 years.
[Click Here for full warranty info.](#)

COLOR OPTIONS
This product is available in the following color options: ● Black ● Brown ● Dark Blue ● Gray ● Green ● Light Blue ● Orange ● Purple ● Red ○ White ● Yellow

DESCRIPTION
Xtreme is hard surfaced, low friction striping material for new, smooth floors. Hard beveled edges help protect from pushed or dragged pallets, and shiny surface resists damage from turning and spinning wheels.

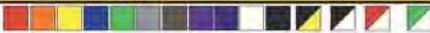
MATERIAL DETAILS
Xtreme is hard surfaced, low friction striping material for new, smooth floors. Hard beveled edges help protect from pushed or dragged pallets, and shiny surface resists damage from turning and spinning wheels.

FLOOR CONDITIONS						WORKING ENVIRONMENTS					
	Xtreme	Supreme V	Mean Lean	Multiflex**	Cold Storage		Xtreme	Supreme V	Mean Lean	Multiflex**	Cold Storage
New Floors	Best	Best	Best	Best	Best	Heavy Fork Traffic	Best	Good	Better	Good	Good
Sealed/Epoxied	Best	Best	Best	Better	Best	Slidding/Pivoting	Best	OK	Better	OK	Better
Unsealed Floor	OK	Best	Good	OK	OK	Dragged/Pushed Pallets*	Better	Good	Best	OK	Good
Chimney/Couplant	N/R	Good	N/R	N/R	N/R	Freeze	N/R	N/R	N/R	N/R	Best
















(“DURASTRIPE XTREME ROLLS,” Last Updated 8 March 2017. Ergomat web page. Accessed 11 February 2019. <http://global.ergomat.com/en/Product/ForCategory/66?catId=81/>)

DURA STRIPE®

Specs | Cleaning | Installation

Type	Material	Glue	Thickness	Hardness	Width	Colors
XTREME	PVC	Rubber Based	30 mils 0.76 mm	98 Shore A	2" / 3" / 4" 5cm / 7.5cm / 10cm	 R O Y LB G GY BR P DB W BK - - - -
SUPREME V	PVC	Rubber Based	36 mils 0.91 mm	95 Shore A	2" - 34" 5cm - 86cm	R O Y - G - - - DB W BK BK/Y BK/W R/W G/W
HAZARD	PVC	Rubber Based	36 mils 0.91 mm	95 Shore A	2" - 34" 5cm - 86cm	- - - - - BK/Y BK/W R/W G/W
MEAN LEAN	PVC	Rubber Based	22 mils 0.56mm	98 Shore A	2" / 3" / 4" 5cm / 7.5cm / 10cm	R O Y - G - - - DB W B - - - -
OUTDOORS	PVC	Acrylic	33 mils 0.85 mm	95 Shore A	2" / 4" 5cm / 10cm	R O Y - G - - - DB W B BK/Y BK/W R/W G/W
OUTDOORS MAX	PVC	Double Sided Acrylic Foam	98 mils 2.5 mm	95 Shore A	2" / 4" 5cm / 10cm	R O Y - G - - - DB W B BK/Y BK/W R/W G/W
COLD STORAGE	PVC	Acrylic	33 mils 0.85 mm	95 Shore A	2" / 4" 5cm / 10cm	R O Y - G - - - DB W B BK/Y BK/W R/W G/W
INLINE PRINT	PVC	Rubber Based	38 mils 0.93 mm	95 Shore A	2" / 3" / 4" 5cm / 7.5cm / 10cm	Any Custom Print Color
MULTIFLEX (Europe only)	Corona-treated PVC	Acrylic	38 mils 1 mm	85 Shore A	2" / 3" / 4" 5cm / 7.5cm / 10cm	R O Y - G - - - P DB W B - - - -

DURA STRIPE RAL COLOR GUIDE (closest RAL value)

XTREME	SUPREME V	OUTDOORS	OUTDOORS MAX	COLD STORAGE	HAZARD	MEAN LEAN	MULTIFLEX
 RAL 3001	RAL 3001	RAL 3001	RAL 3001	RAL 3001	RAL 3001	RAL 3001	RAL 3020
 RAL 2002	RAL 2009	RAL 2009	RAL 2009	RAL 2009	RAL 2009	RAL 2002	RAL 2009
 RAL 1021	RAL 1003	RAL 1003	RAL 1003	RAL 1003	RAL 1003	RAL 1021	RAL 1023
 RAL 5017	RAL 5005	RAL 5005	RAL 5005	RAL 5002	RAL 5002	RAL 5005	
 RAL 6029	RAL 6025	RAL 6025	RAL 6025	RAL 6026	RAL 6026	RAL 6026	RAL 6032
 RAL 7037			RAL 9007	RAL 9007	RAL 9007		
 RAL 7013							
 RAL 5022							RAL 5022
 RAL 9005							RAL 5010
 RAL 9016	RAL 9001	RAL 9001	RAL 9001	RAL 9001	RAL 9001	RAL 9001	RAL 9003
 RAL 9005	RAL 9005	RAL 9005	RAL 9005	RAL 9005	RAL 9005	RAL 9005	RAL 9005
 RAL 9005/RAL 1021	RAL 9005/RAL 1021	RAL 9005/RAL 1021	RAL 9005/RAL 1021	RAL 9005/RAL 1021	RAL 9005/RAL 1021		
 RAL 9005/RAL 9001	RAL 9005/RAL 9001	RAL 9005/RAL 9001	RAL 9005/RAL 9001	RAL 9005/RAL 9001	RAL 9005/RAL 9001		
 RAL 3001/RAL 9001	RAL 3001/RAL 9001	RAL 3001/RAL 9001	RAL 3001/RAL 9001	RAL 3001/RAL 9001	RAL 3001/RAL 9001		
 RAL 6026/RAL 9001	RAL 6026/RAL 9001	RAL 6026/RAL 9001	RAL 6026/RAL 9001	RAL 6026/RAL 9001	RAL 6026/RAL 9001		

DURA STRIPE SELECTION GUIDE

Floor Condition	Xtreme	Supreme V	Mean Lean	Cold Storage	Outdoor MAX	Outdoor	Multiflex
New Floors	Best	Best	Best	Best	NR	Best	Best
Sealed/Epoxied	Best	Best	Best	Best	NR	Best	Better
Unsealed Floor	Good	Best	Good	OK	NR	OK	OK
Chipped/Gouged	NR	Good	NR	NR	Best	NR	NR
Uneven	NR	Better	OK	NR	Best	NR	NR
Oily	CK	Good	OK	Best	Better	Best	Good
Wet	CK	Good	OK	Best	Better	Best	Good
Non-Skid/Textured	Possible (w/Testing)	Possible (w/Testing)	Possible (w/Testing)	NR	Best	NR	Possible (w/Testing)
Heavy Forklift Traffic	Best	Good	Better	Good	NR	Good	Good
Skidding/Pivoting	Best	OK	Better	Better	NR	Better	OK
Dragged/Pushed Pallets*	Better	Good	Best	Good	NR	Good	OK
Freezer (23°F / -5°C)	NR	NR	NR	Best	Good	Best	NR

NR - Not Recommended

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 German: +49 9542 30 367-50 | French: +33 1 446 410 28

Rev 13/08/2018

("Durastripe Data Chart," Last Updated 8 March 2017. Ergomat web page. Accessed 11 February 2019. http://global.ergomat.com/en/Content/pdfs/en/durastripe_data_chart.pdf.)

Heskins PermaStripe:

2008: No mention of beveled edge or pallet dragging in description. Does mention pallet skid in warranty clause at bottom, however: “the Heskins warranty for PermaStripe® is conditionally warranted for 2 years from product purchase. Warranty claims are only limited to replacement of PermaStripe®. The warranty does not cover items being dragged, pushed, pushed or scraped across such as pallets or transit skids.”

Home
About Heskins
Shapes
Applicator
Links
Enquiry
Brochure
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INVESTORS IN PEOPLE



Aisle Marking | Warehouse Line Marking | PermaStripe the DuraStripe Alternative



PermaStripe® is the modern method of applying a durable aisle stripe.

It can be used successfully in any environment.

The PermaStripe® aisle marking system is instantly applied and is even supplied with a 2 year warranty (please see below for more details on this). It is the most durable and effective aisle marking system available, it has the following advantages;

- No detailed preparation is available, unlike a painted aisle marking system no fumes or contaminants are given off; it can even be applied whilst the area is still being used!
- Installation of our aisle marking could not be easier, simply peel back the liner and press down, Heskins also offer an applicator, this enables rapid installation of perfectly straight lines.
- There is no cure time unlike other aisle marking systems - you have the stripe you want there and then!
- Extreme temperature resistance - all our warehouse line marking range, once applied, performs down to -45°C
- 2 year warranty on PermaStripe® warehouse line marking
- Available in a huge array of formats; rolls, shapes, colours, numbers, letters, arrows and disks, we can even make to your distinctive requirement for warehouse line marking
- A wide range of PermaStripe® roll widths are available. 50mm and 100mm are the most popular but anything is possible, roll lengths of 30m are standard but we can offer longer lengths which will offer less change time
- Can be used successfully in any environment
- PermaStripe is a cost effective and viable alternative to duraStripe



2 year warranty

The Heskins warranty for PermaStripe® is conditionally warranted for 2 years from product purchase. Warranty claims are only limited to replacement of PermaStripe®. The warranty does not cover items being dragged, pushed, pushed or scraped across such as pallets or transit skids.

(12 Jan. 2008. Internet Archive.

<http://web.archive.org/web/20080112192151/http://permastripe.co.uk/>)

2011: Brochure refers to “highly chamfered edge”


PermaStripe®

PermaStripe is the World's most effective and durable aisle marking system, it is the modern alternative to resin and paint helping forward thinking companies achieve 5S status.

- Installation could not be easier, simply peel back the liner and stick down, Heskins has also developed its own applicator, this enables rapid installation of PermaStripe
- No detailed preparation is required, unlike paints and resins no fumes or solvents are emitted; the work area can be used whilst it is being applied, even in food preparation facilities.
- No curing time – you have the stripe you want there and then!
- The plain colours are a solid homogenous construction, if scratched it does not affect the colour
- Due to its extreme strength it will not snap if removed enabling easy workplace changes unlike paint or resin
- 50mm, 75mm or 100mm roll widths, 30m rolls for long length application
- Available in a huge array of formats; rolls, shapes, numbers, letters, arrows and disks, we can even make to your distinctive custom requirements
- 2 year warranty!

2 YEAR WARRANTY

The Heskins warranty for PermaStripe® is conditionally warranted for 2 years from product purchase. Warranty claims are only limited to replacement of PermaStripe®

The warranty does not cover items being dragged, pushed or scraped across such as pallets or transit skids.

Highly chamfered edge to easily cope with forklift traffic

Even industrial grade PVC – Extremely tough

Highest quality adhesive is coated edge-on-edge with no chance of failure

Removable film liner allowing fast and easy application

Any shape can be configured, we hold on our shelf PermaStripe® ready cut in letters, numbers and shapes. You can however choose any shape or character you prefer, our cutting process is accurate to 0.1mm!

This is a free and usable sample. Simply pull it from the card and try it for yourself!

Our standard colour range is yellow, fluorescent yellow, green, red, white, blue orange, black, photoluminescent (glow in the dark), black/yellow chevron and red/white chevron. We can produce to any other colour dependent on quantity, please enquire.

Yellow	Fluorescent Yellow	Green	Red	White	Blue
Orange	Black	Photoluminescent (glow in the dark)	Black/Yellow chevron	Red/White chevron	

mail@permastripe.co.uk | www.permastripe.co.uk

mail@permastripe.co.uk | www.permastripe.co.uk

(26 Jun. 2011. Internet Archive.

<http://web.archive.org/web/20110626154643/http://www.permastripe.co.uk/library/14905%20-%20Heskins%20Permastripe%20Brochure.pdf.>)

Start seeing “highly chamfered edge” on web-site at this time also

Home
About Heskins
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Brochure
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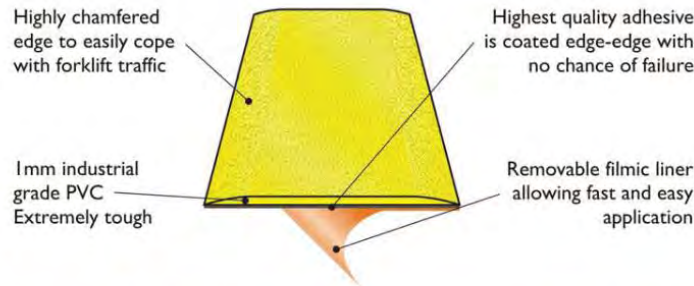
Fax
+44-(0)1254-832476

ACS
REGISTRARS
Environmental Assurance
ISO 14001

ACS
REGISTRARS
Quality Assurance
ISO 9001

Aisle Marking Tape | Warehouse Line Marking | PermaStripe the DuraStripe Alternative

PermaStripe® is the modern method of applying a durable aisle stripe, it can be used successfully in any environment.



The PermaStripe® aisle marking system is instantly applied and is even supplied with a 2 year warranty (please see below for more details on this). It is the most durable and

(20 October 2011. Internet Archive.

[http://web.archive.org/web/20111020174632/http://www.permastripe.co.uk/.](http://web.archive.org/web/20111020174632/http://www.permastripe.co.uk/))

2014: PermaStripe Press Release. No mention of beveled edge or pallet drag.

Do You Want To Buy Marking Tapes For Your Warehouse? If Yes, Then Contact Perma Stripe

A company named Perma Stripe makes top quality marking tapes that many companies use in their warehouses, factories and facilities because they last longer than the paint

BriefingWire.com, 11/20/2014 - Many companies have certain places that they want to keep isolated from the normal staff members. Only the designated staff members of the company are allowed to go in that area.

Companies puts a marking tape at the beginning of the area so as to let everybody know that they are not supposed to cross this mark for any reason.

Earlier, people used to mark the line with paint, but it had certain disadvantages due to which other methods were found.

The best way of drawing a line is by marking tapes. A company named Perma Stripe is manufacturing great marking tapes. Their marking tapes have a highly chamfered edge to easily cope with forklift traffic.

They also use 1 mm industrial grade PVC because of its toughness. These tapes are coated with the highest quality adhesive that will last longer.

The tapes also have a removable filmic liner that allows fast and easy application.

Perma Stripe is different from all other marking equipment and it is widely used in Warehouse line marking.

The Production manager of the company, HauldenCauldfield has recently given an interview in which he said,” The construction of Perma Stripe makes it different from any other product.

The company even provides a 2-year warranty on Perma stripe. There are many advantages of using a perma stripe, such as:

1. You can simply use perma stripe without any preparation.
2. Perma stripe will not give off any fumes and solvents, which makes it an ideal product for factories having food production, cosmetics, pharmaceutical items, etc.
3. There is no issue of any sort of contamination or wasted production.”

Perma stripe was designed to provide a facility to the business owners to have something that is easy to install and use.

You can simply remove the back cover and press down the tape. The thickness of the tape will not let the tap deviate off its path.

This is a solid, homogenous piece of flexible plastic that can make your work a lot easier. It can be used immediately after application, as there is no cure time with this product.

PermaStripe is a specialist manufacturer of self adhesive tape. They are based in the North West of England, is a large, modern factory that is fully certified to a high standard.

They use very efficient manufacturing methods, meaning that they can make a quality product and still be competitive with their prices.

Over the years, they have developed their operations and their product so that they are now the leading choice for marking materials.

They supply companies and warehouses from all over the world. They manufacture and sell their own tapes, which can be made to suit any dimensions. You can visit their website at <http://www.permastripe.co.uk>

(“Do You Want To Buy Marking Tapes For Your Warehouse? If Yes, Then Contact Perma Stripe,” 20 Nov. 2014. PermaStripe. Briefingwire page. Accessed 5 February 2019. <https://www.briefingwire.com/pr/do-you-want-to-buy-marking-tapes-for-your-warehouse-if-yes-then-contact-perma-stripe>.)

2015: Briefly mentions pallet drag in this press release

PermaStripe Includes Many Different Variations Of Floor Marking Tape For Your Needs.

Marking different areas in order to identify different areas in the proper way

BriefingWire.com, 1/27/2015 - Regardless of what business or industry that you are in, you will understand how important that it is to properly mark the different areas such as hazards so that they do not become a problem for anyone at any time.

The best way in which to do this would be via the use of floor tapes as these can be easily visible to anyone who would be walking near them at any time, even if they are in the low traffic areas of your business.

There are many companies who offer products such as this and so you will want to do your due diligence and find the best company who can cater to all of your exact needs.

There are many aspects and hazards that need to be marked out such as traffic areas, either pedestrian or vehicular, so that no accidents will occur.

For situations like this you will need to have a tape down on the floor that is hard wearing so it can deal with all the people and forklift trucks that may go over them.

This is something that you can discuss with your chosen company before you buy from them.

PermaStripe are a leading company in this field and are able to provide every customer with the best in floor marking tapes.

They are able to do this as they have their own production facility whether they have many normal options available, but you also have the chance to have a custom design created if that is what you need.

Due to their differing machines, they can make tapes of different shapes, designs and sizes.

By talking to them they are able to listen to what you are looking for and can recommend what would be the best option for you.

Production Manager Haulden Cauldfield says: "In today's society we understand that every business has different requirements when it comes to marking different routes or hazards on the floor.

This is why we have made sure we have the production equipment available to us so that we can cater to the different individual needs of each customer.

We pride ourselves in manufacturing and supplying the best quality tapes so you can rest assured that what you will be getting is nothing but the highest quality and something that you will be entirely happy with as it will last a very long time."

PermaStripe is a specialist manufacturer of self adhesive tape. They are based in the North West of England, is a large, modern factory that is fully certified to a high standard.

They use very efficient manufacturing methods, meaning that they can make a quality product and still be competitive with their prices.

Over the years, they have developed their operations and their product so that they are now the leading choice for marking materials.

They supply companies and warehouses from all over the world. They manufacture and sell their own tapes, which can be made to suit any dimensions.

You can visit their website at <http://www.permastripe.co.uk>

(“PermaStripe Includes Many Different Variations Of Floor Marking Tape For Your Needs,” 27 Jan, 2015. PermaStripe. Briefingwire page. Accessed 9 February 2019. <https://www.briefingwire.com/pr/permastripe-includes-many-different-variations-of-floor-marking-tape-for-your-needs>.)

“Beveled edges for super smooth transit”

The advertisement features a blue header with the text: "For long lasting, highly visible floor markings, choose PermaStripe® or PermaRoute®". Below this, the PermaStripe section shows a roll of yellow and black tape with a forklift icon and a "WARRANTY 2 YEARS" badge. The PermaRoute section shows a roll of yellow and black tape with a pedestrian icon. Both sections include descriptive text about their features and benefits. At the bottom, there are three icons: a forklift, a color wheel, and footprints, each with a corresponding "More" button.

For long lasting, highly visible floor markings, choose PermaStripe® or PermaRoute®

PermaStripe®

Self adhesive floor marking tape
1mm industrial PVC
Bevelled edges for super-smooth transit.
Solid colour all the way through.

WARRANTY 2 YEARS

PermaRoute®

Self adhesive route marking system
Coloured or printed tape under a tough clear laminate. Cut to any shape – stock and custom designs. Roll widths up to 1168mm

More

More

(25 Jul. 2015. Internet Archive.

[http://web.archive.org/web/20150725001535/http://www.permastripe.co.uk/.](http://web.archive.org/web/20150725001535/http://www.permastripe.co.uk/))

“We add a chamfer, also known as a feathered edge”

Not just tape on a roll – we offer a large range of shapes, letters, numerals and colours in the PermaStripe material. Whole marking schemes can be developed using the one system for a consistent appearance and easy planning.

What can PermaStripe offer?

- **Colour that will not fade**, cannot be scratched off and will not be removed by harsh solvents such as MEK, toluene etc.
- **Huge amounts of adhesion** for initial grab and long term staying power
- **Lifts at end of service leaving a clean surface** requiring little or no renovation.

PermaStripe floor marking tape is a solid, homogenous piece of plastic.

As PermaStripe is so thick (1mm plastic with an additional 160mu of adhesive) we add a chamfer, also known as a feathered edge. We produce three sale widths (50mm, 75mm and 100mm) along with a width of 250mm for our internal die cutting use. The upper surface is finished with either a mild non-slip emboss or an easy clean smooth surface.

We've been using PermaStripe smooth to mark the walkways in our food prep areas for a couple of years now, and I can honestly say they look as good now as the day they were laid – despite daily scrubbing.



Customer, Food Manufacturer

(16 Nov. 2015. Internet Archive.

<http://web.archive.org/web/20151116060409/http://www.permastripe.co.uk/permastripe.>)

2016: FloorTapeHQ supplier of PermaStripe Press Release

FloorTapeHQ Launches New Website and New Products.

The country's leading supplier of PermaStripe industrial floor marking tape has just launched a new website.

BriefingWire.com, 3/18/2016 - United States : The country's leading supplier of PermaStripe industrial floor marking tape has just launched a new website. They've also added several excellent new additions to their ever-expanding range of warehouse tape products.

FloorTapeHQ.com is now the one-stop shop for warehouse and 5s safety managers who require strong and resilient floor tape solutions to withstand heavy traffic such as forklifts, pallet carts and other heavy machinery. The tape on offer is priced competitively and guaranteed to perform as expected or your money back.

The most popular item supplied by FloorTapeHQ is PermaStripe Floor Marking Tape. At 43 mils thickness, it is the strongest and most resilient line tape in the industry today, and it is used in over 4,000 industrial locations worldwide. PermaStripe meets the challenging needs of warehouse managers who want to both efficiently organize their workplace as well as increase the overall level of safety. It's perfect for marking aisles and warehouse floors and it is excellent for 5S initiatives as well. The product is available in eleven different colors including the most popular standard yellow as well as black & yellow hazard and also comes in three widths - 2", 3" and 4". The various colors and sizes meet the needs of even the most challenging warehouse environment.

With more than fifteen years experience in the industry, FloorTapeHQ is a brand trusted by thousands of industrial workplaces. They provide high quality and durable floor marking tape to all US industries. Not only do they have an excellent selection with a lot of detail on the website, they offer 24/7 live telephone and chat support as well as 24 hour email inquiry turnaround. They are focused on making sure your questions are answered and that you purchase the proper tape for your needs. All products come with a 100% money-back guarantee so clients should feel confident about their purchase. Also, FloorTapeHQ offers a unique 2 year limited warranty on all floor tape that is purchased.

If for any reason you may be unsatisfied with your purchase, FloorTapeHQ stands behind its products 100% and will offer a no questions asked refund. No matter what the issue, the team is always on hand to help you solve your warehouse floor marking tape needs.

Some of the other popular products available right now include:

- * Anti-Slip Tape
- * Vinyl Tape
- * Floor Signs
- * 5S Angles & Shapes

FloorTapeHQ processes orders within one business day. All orders placed before 11am CST are shipped out the same business day.

When it comes to flooring tape that meets clients demanding specifications, there are no better products on the market today.

For Media Contact:

Person Name: John G. Batemen

Address: 2838 N Clark St

Chicago, IL, USA, 60657

Phone: 888-239-7760

Email Id: support@floortapehq.com

Website: <http://floortapehq.com/>

(“FloorTapeHQ Launches New Website and New Products,” 18 Mar. 2016. FloorTapeHQ. Briefingwire page. Accessed 9 February 2019. <https://www.briefingwire.com/pr/floortapehq-launches-new-website-and-new-products>.)

2017: PermaStripe Brochure

ColorCover

ColorCovers are fantastic for highlighting your own signs that can be printed on plain paper in any printer.

This durable ColorCover comes in 5 colours that help to provide full coordination in your facility.

For more PermaStripe® samples please contact us: mail@permastripe.co.uk www.permastripe.co.uk

For more PermaStripe® samples please contact us: mail@permastripe.co.uk www.permastripe.co.uk

PermaStripe®

STOCK COMPONENTS

Letters A-J	Letters G-M	Letters N-T	Letters U-Z
50mm x 100mm	50mm x 100mm	50mm x 100mm	50mm x 100mm

Numbers 0-4	Numbers 5-9	Boots	Feet
50mm x 100mm	50mm x 100mm	240mm x 100mm (50mm x 100mm) (20mm x 120mm)	50mm x 100mm (50mm x 100mm) (20mm x 120mm)

01234 56789

X	T	L	90° corner
300mm x 300mm	300mm x 200mm	200mm x 200mm	50mm 50mm 100mm

Junction	Bridge	45° Corner	End Cap
50mm 75mm 100mm	50mm 75mm 100mm	50mm 75mm 100mm	50mm 75mm 100mm

Disc	Arrow - Large	Arrow - Small
50mm	300mm x 120mm	100mm x 65mm

Correct at time of printing - check the website for additions

HESKINS

ANTI-SLIP SOLUTIONS

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www.heskins.com

PermaStripe®

THE WORLD'S TOUGHEST AISLE MARKING SYSTEM
INSTANTLY APPLIED WITH NO FUSS

Unlike paint, PermaStripe® is durable yet easily removed.

Aisle markings clearly show boundaries - improving safety and tidiness.

Respoke permanent floor marking signs are instantly

PermaStripe® is the World's most effective and durable aisle marking system.

It is the modern alternative to resin and paint helping forward thinking companies achieve 5S status.

- Installation could not be easier, simply peel back the liner and stick down, Heskins has also developed its own applicator; this enables rapid installation of PermaStripe.
- No detailed preparation is required, unlike paints and resins no fumes or solvents are emitted, the work area can be used whilst it is being applied, even in food preparation facilities.
- No curing time - you have the stripe you want instantly!
- The plain colours are a solid homogeneous construction, if scratched it does not affect the colour.
- Due to its extreme strength it will not snap if removed enabling easy workplace changes unlike paint or resin.
- Available in 50mm, 75mm or 100mm roll widths, 30m rolls for long length application.
- Available in a huge array of formats; rolls, shapes, numbers, letters, arrows and disks, we can even make to your distinctive custom requirements.
- Embossed anti-slip surface or smooth for easier cleaning.

PermaStripe® factory markers

Factory markers are 450mm diameter, made from a semi-rigid, self-adhesive PVC vinyl and available off the shelf in a range of prints and languages. The full range is available on our website.

WARRANTY

2 YEARS

The Heskins warranty for PermaStripe® is conditionally warranted for 2 years from product purchase. Warranty claims are only limited to replacement of PermaStripe®.

The warranty does not cover items being dragged, pushed or scraped across such as pallets or transport slabs.

PermaStripe® die-cut shapes

A wide range of ready cut PermaStripe® shapes allow you to create junctions and designate special areas, all to the same high quality. See the back cover of this document, and our website.

Color Range

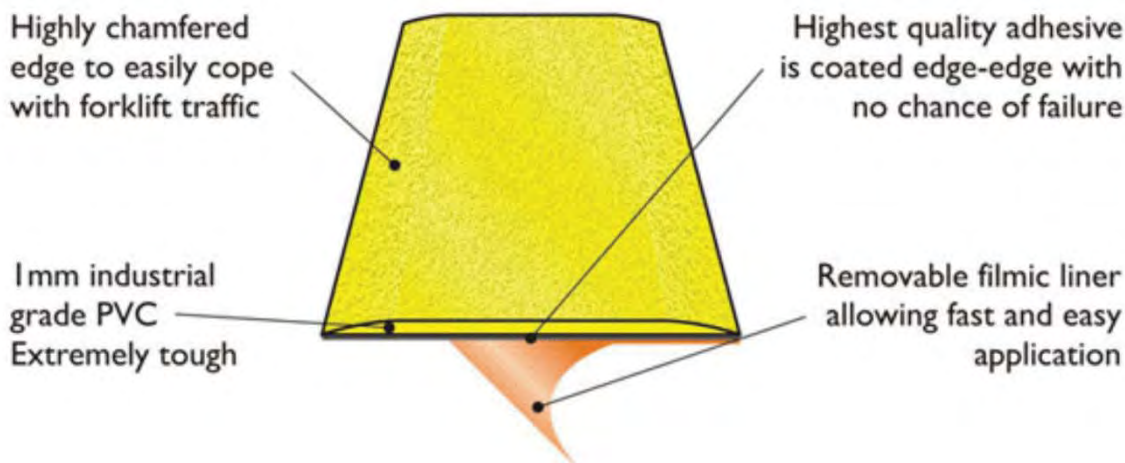
Color	Code
Yellow	(E/S)
Fluorescent yellow	(E)
Green	(E/S)
Red	(E/S)
White	(E/S)
Blue	(E/S)
Orange	(E/S)
Black	(E/S)
Photo-luminescent (glow in the dark)	(E)
Yellow/black chevron	(E/S)
Red/white chevron	(E/S)

E = Embossed surface

("PermaStripe Brochure," 2017. PermaStripe web page. Accessed 10 February 2019. <https://www.permastripe.co.uk/wp-content/uploads/2017/09/permastripe-brochure-sep-17-digital.pdf>.)

2019: Current product language for PermaStripe

"Floor marking tape does not come any tougher than PermaStripe. PermaStripe is the world's toughest floor marking tape, it is unique, and it has a construction that cannot be compared to anything else. PermaStripe is the material designed to meet modern 5S requirements.



The construction is a solid homogenous piece of flexible plastic 0.043" thick. Unlike normal floor marking tape the color is not a print, the color is an integral part of the product, and it cannot be removed by solvents or even scraped away, even if someone scrapes it the color remains. PermaStripe is so incredibly thick the edge has to be chamfered to prevent it becoming a trip hazard. Each roll has is produced individually, not slit, we apply the adhesive using a special laminator, the adhesive is coated completely edge to edge, if an adhesive material is going to fail then it will fail on the edges, no one manages to lift up the middle without edge failure first. PermaStripe uniquely has edge to edge adhesive.

Our heavy duty floor marking tape is produced in 13 industry required colors; black, glow in the dark, yellow, yellow/black, green, red, white, red/white, blue, black/white, orange and fluorescent yellow. Three roll sizes are available 2"x98', 3"x98' and 4"x98'.

All numbers and letters are produced in either 3.75" or 7" high. We produce shapes to create the complete efficient lean production marking system; the shapes include feet to show safe walking areas, 90° or 45° angles to create the perfect corner, arrows to highlight zones etc.

Unlike a line marking paint or a line marking resin no fumes are created and there is no curing time ensuring that PermaStripe is perfect for use in laboratories, pharmaceutical production sites, food preparation areas etc. As PermaStripe is solid it does not need to dry, it can be walked on immediately after application. If a company wants to ensure that there is no production

downtime then PermaStripe is the material of choice, all production can continue whilst the aisle marking is applied and can be used immediately afterwards.

Even though PermaStripe is so tough it can even be removed, its extreme strength ensures that it will not snap or fracture, resulting in the unique ability to change the color of individual areas, a green recycling area can be changed to become a red reject site, all with ease, imagine trying to do that with a line marking paint or a line marking resin!

PermaStripe marking tape conforms to OSHA regulations and standards, OSHA stipulates that a business must follow this set of rules:

- All places of employment shall be kept clean and in orderly fashion, all passageways should be kept clear from obstruction
- Where mechanical handling equipment such as forklifts are in use, sufficient safe clearances shall be made for aisles, loading bays, doorways and turning zones and ways of passage.
- Permanent aisles and passageways for machinery and personnel shall be marked as appropriate.

PermaStripe is the solution, this heavy duty floor marking is a durable and hard wearing tape, which also follows and helps to meet all of the requirements for this section of OSHA 1910.22 (Walking-Working Surfaces). If OSHA regulations are not followed, a citation will be issued showing non conformance with their regulations, these can be followed up with a large fine, going into the hundreds of thousands of dollars, this can affect a companies reputation, and cripple them financially. Heskins realizes that Reputation is a key feature of business. PermaStripe can solve these problems, what else would you expect from the worlds toughest line marking material?

PermaStripe Smooth

PermaStripe Smooth carries all the benefits of our flagship PermaStripe range, except for one feature. The textured surface is replaced with a completely smooth surface, making for easier cleaning and better aesthetic properties.

Particularly suited to areas and environments with strict hygiene regulations, the smooth surface will prevent harboring of bacteria, while the material itself will allow for an organized, safe workplace. Areas that focus on aesthetics will also receive the same benefit of having an organized working environment, with sleek lines that will compliment the rest of the decor.

PermaStripe Applicator

The PermaStripe applicator is the ultimate way to rapidly apply perfect lines; the custom designed applicator will run at whatever speed you chose to walk at. The PermaStripe is loaded on the back, the guide rollers then allow for neat application, the backing liner is removed

automatically by the applicator machine and neatly stored. We can either rent or sell the applicator (rental varies from state-to-state, please enquire).

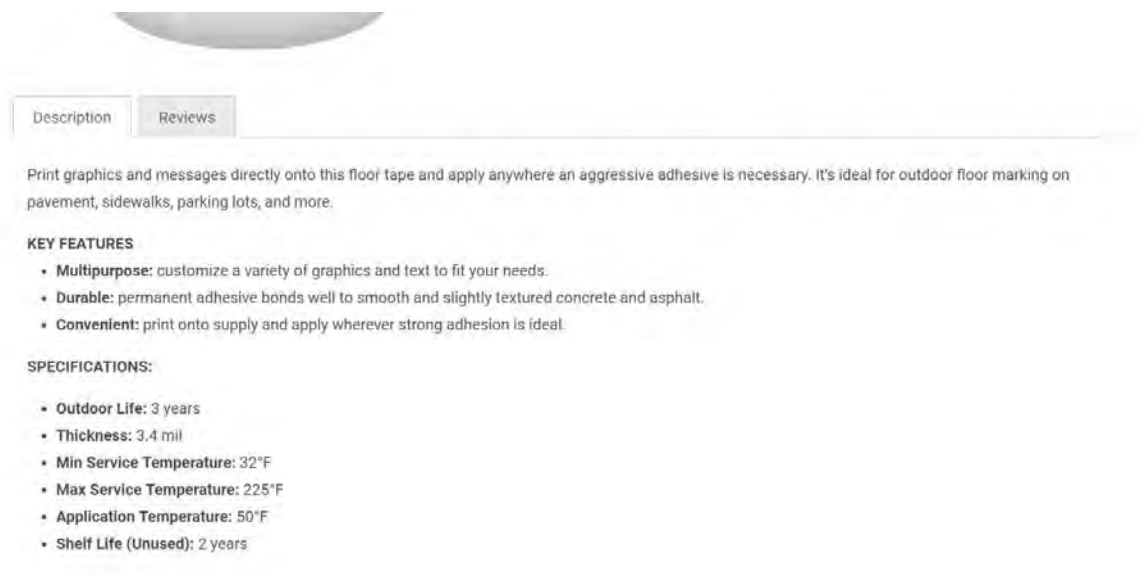
To order or enquire further about our PermaStripe range, you can contact our friendly sales team by phone, email, live chat or the [contact us form](#) on this site, or view our video below. This video will show you all of the benefits that PermaStripe can offer!”

(“PermaStripe® Floor Marking Tape,” Last Updated 28 January 2019. Heskins web page. Accessed 11 February 2019. <https://www.heskins.us/permastripe>.)

Graphic Products DuraPav:

Prior to this appears that the only mention of Graphic Products tape are for labels and not floor marking tape

2019: Current product listing of DuraPav



(“DuraPav Floor Marking Tape,” Last Updated 5 October 2017. Graphic Products web page. Accessed 11 February 2019. <https://store.graphicproducts.com/en-us/duralabel/prINTER-supplies/supplies/floor-marking/durapav>.)

SUPPORTING DOCUMENTS



US008088480B2

(12) **United States Patent**
Goecke

(10) **Patent No.:** **US 8,088,480 B2**
(45) **Date of Patent:** **Jan. 3, 2012**

(54) **ADHESIVE TAPE**

(75) Inventor: **Thomas R. Goecke**, Rocky River, OH
(US)

(73) Assignee: **Shieldmark, Inc.**, Rocky River, OH
(US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1013 days.

(21) Appl. No.: **10/674,108**

(22) Filed: **Sep. 29, 2003**

(65) **Prior Publication Data**

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(51) **Int. Cl.**

D06N 7/04 (2006.01)

C09J 7/02 (2006.01)

B32B 7/12 (2006.01)

(52) **U.S. Cl.** **428/343**; 428/141; 428/332; 428/337;
428/906

(58) **Field of Classification Search** 428/40.1,
428/40.6, 41.3, 41.6, 42.1, 207, 343, 354,
428/217, 908.8, 40.8, 141, 174, 332, 337,
428/906

See application file for complete search history.

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Handbook of Pressure Sensitive Adhesive Technology, 3d Edition, Satas & Associates, 1999, Chapter 5—Peel Adhesion, p. 79.

* cited by examiner

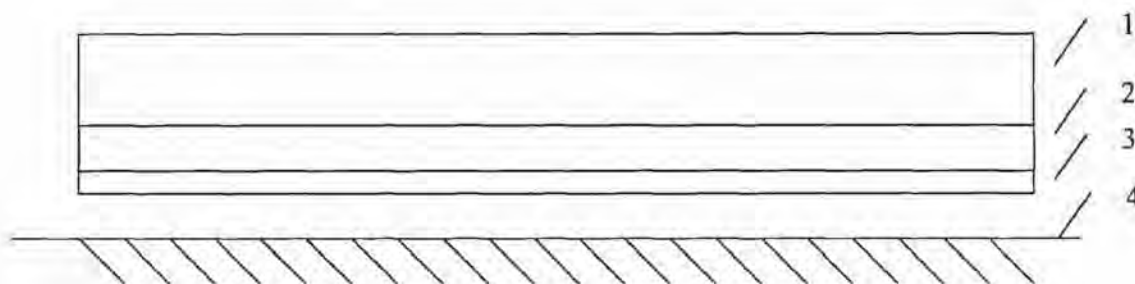
Primary Examiner — Patricia Nordmeyer

(74) *Attorney, Agent, or Firm* — Brennan, Manna & Diamond

(57) **ABSTRACT**

The adhesive tape of this application comprises a layer of polymeric material, particularly a polyvinyl chloride, having a Shore A Hardness of between 92 and 100 and a layer of adhesive material attached to a surface of the layer of polymeric material.

13 Claims, 1 Drawing Sheet

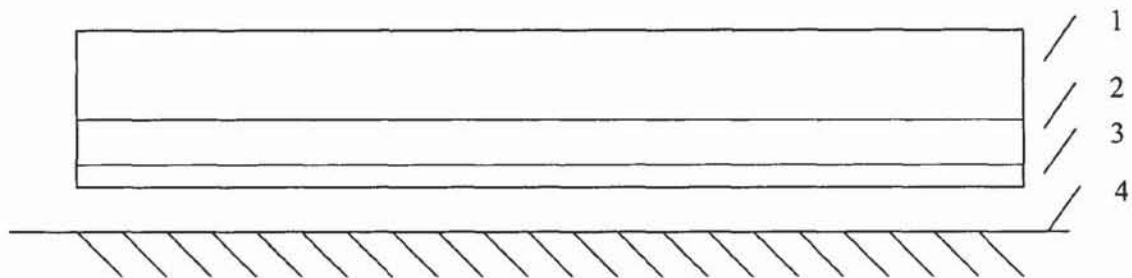


U.S. Patent

Jan. 3, 2012

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FIGURE 1



US 8,088,480 B2

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ADHESIVE TAPE

BACKGROUND

This invention relates to an adhesive tape having superior ductility, strength, tear resistance and abrasion resistance, particularly a pressure sensitive adhesive. Polymeric pressure sensitive adhesive tapes are economical and adaptable to many different applications. One primary example is as floor marking in industrial and factory environments. However, there are several disadvantages to using such tape in industrial settings. One disadvantage is that the tape lacks sufficient strength and hardness to prevent wearing, tearing, cracking and breakage from heavy and repeated traffic, such as from forklift trucks. Similarly, as a result of poor adhesive quality, repeated traffic has a tendency to detach many commercially available tapes from the floor. Another disadvantage is that the aesthetic qualities and physical properties of the tape are diminished from scuffing, scratching, and the like. Such disadvantages plague existing polymeric pressure sensitive adhesive tapes. Because of these disadvantages that have been associated with polymeric pressure sensitive adhesive tape, wide industry acceptance has been historically difficult to achieve. Accordingly, many opt to rely on the time consuming and exacting practice of painting.

In view of the above discussion, it is an advantage of the present invention to provide a polymeric adhesive tape that has superior ductility, strength, tear resistance and abrasion resistance. Other advantages of the present invention will be apparent from the following detailed description.

SUMMARY OF INVENTION

According to one embodiment, an adhesive tape is provided. The tape has a first layer of polymeric material having a Shore A Hardness of between 92 and 100 and a thickness of between 0.020" and 0.065", and a second layer of adhesive. Preferably, the adhesive is of a pressure sensitive type.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a cross-sectional view illustrating the embodiment of a polymeric pressure sensitive adhesive tape.

DETAILED DESCRIPTION OF THE INVENTION

The adhesive tape of this invention usually comprises a layer of polymeric material and at least one layer of adhesive material. The pressure-sensitive adhesive tape of this invention is not limited to having only the above layers of polymeric material and layer of pressure-sensitive adhesive material. It may optionally have an additional layer, such as a laminating substrate on an outermost side of the above adhesive layer. The laminating substrate is usually peeled off and thrown away when pressure-sensitive adhesive tape is actually used. Therefore, inexpensive materials are preferred, however, there are no particular limitations on the materials used for the laminating substrate.

FIG. 1 is an example of the pressure-sensitive adhesive tape of this invention wherein a layer of polymeric material (1) is attached to the top side of a layer of pressure-sensitive adhesive material (2) and a laminating substrate (3) is attached to the bottom side of the pressure-sensitive adhesive material. Upon removal of the laminating substrate (3), the tape can be applied to a floor (4) with the application of pressure.

The pressure-sensitive adhesive tape of this invention can be produced in a variety of lengths, widths, and thickness. A

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variety of colors can also be used for the outer surface of the layer of polymeric material (1). For example, safety yellow can be used for aisle markings, or red can be used for quarantine and reject markings in a production facility. Coloring can be achieved by introducing a colorant in any form, including pigments and dyes into the polymeric material.

The adhesive employed in layer material (3) may be any of those heretofore employed in the art for preparing adhesive structures. By way of illustration, suitable adhesives of this general description include those disclosed in U.S. Pat. No. 5,061,559, herein incorporated by reference.

The layer of polymeric material (1) may be a durable polymer such as polyvinyl chloride, polycarbonate, or a terpolymer comprised of acrylonitrile, butadiene and styrene or the like. A clear or tinted polyvinyl chloride is a preferred material. The polymer selected must have Shore A Hardness between, for example, 92-100, and preferably between 93-97. The outer surface of the layer of polymeric material (1) is preferably textured. The layer of polymeric material (1) may have a thickness of about, for example, 0.020" to 0.065".

Advantageously, this embodiment of the invention provides improved tear resistance, strength, and abrasion resistance by employing the sum or all of the combination of polymer selected, Shore A Hardness, textured surface, and layer thickness.

EXAMPLES

One embodiment of the invention will be described below in greater detail through the following examples.

Test samples were performed on a 4" wide sample of the pressure sensitive adhesive tape of this invention. The example tape was constructed of a semi-rigid 95A polyvinyl chloride from Artemis Industries, 2550 Gilcrest Rd, Akron Ohio 44305 which was extruded from a 2½" diameter NRM extrusion machine at 360-380° F. at an extrusion rate of 400 ft per hour to yield a 0.065 thick, 4" wide layer. A textured first surface of the extruded polymer layer was achieved by following the above process parameters. During extrusion a rubberized double sided carpet tape (Product #591B) from International Tape Co., P.O. Box 240, 6 Industrial Drive, Windham, N.H. 03087 was applied to a second side of the extruded polymer layer. A tape from Windmill Tapes of Great Britain (www.windmilltapes.com) was used for comparison purposes. Test samples were conditioned at 73±3° F. and 50±5% relative humidity for at least 24 hours prior to testing.

Tensile strength at yield point was determined according to ASTM D 882 testing method. A 0.5"x8" sample was prepared and placed in the jaws of the instrument at a separation of 4.0". The tester was started at a separation rate of 2.0 in/min. At the instance the tape yielded the force was recorded. Five replicates of each sample were conducted and the results were normalized to pounds per inch width. Results indicate higher yield point and higher absolute forces involved at yield point for the pressure sensitive adhesive tape of this invention. Particularly, the yield point in both machine and traverse direction were respectively, on average, 3,176 lb/in² and 3,136 lb/in².

Tear resistance was determined according to the ASTM D 1004 test method. The samples were die cut according to the method. The liner from the sample was removed and the sample was placed in the jaws of the tester at a separation of one inch. The tester was started at a rate of 2.0 in/min. The maximum force encountered during testing was recorded. Five replicates of each sample in both the machine and traverse direction were tested. Results indicate substantially improved tear strength in both the machine and traverse direc-

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tions for the pressure sensitive adhesive tape of this invention. Particularly, the tear strength in both machine and traverse direction was respectively, on average, 22.3 lb and 22.1 lb.

Caliper or thickness was determined according to the PSTC-33 method. Caliper of the material was determined both with and without the liner. Ten replicates of each sample were measured. Results indicate substantially increased thickness of the pressure sensitive adhesive tape of this invention, partly because of the inherent characteristics of the semi-rigid surface. Particularly, the thickness of the material, with and without the liner, was respectively, on average, 68.4 mil and 65.4 mil.

Peel adhesion was tested according to a modified PSTC-101D method. The modification included dwell time. Peel adhesion is a measure of the strength of the adhesive bond between the tape and the test surface. Exactly one (1.0) inch wide samples were applied to a standard stainless steel test panel at a rate of 24 in/min with a 4.5 pound rubber covered roller according to the method. The tape was then peeled from the substrate at a 90° angle after a dwell time of one hour. The force required for removal was measured. Five replicates of each sample were tested. Results indicate substantially increased peel adhesion for the pressure sensitive adhesive tape of this invention when applied to stainless steel. Particularly, the peel adhesion of this material was, on average, 5.2 lb/in width.

Abrasion resistance was determined according to a modified ASTM D 5264 test method. The material was cut to a 2.5"x6" size. A new 2"x4" piece of standard A-5 receptor material (moderate abrasive) from Gavarti Associates Ltd. was affixed with double-sided tape to the four pound instrument weight (0.5 lb/in² load). This in turn was placed over the test sample. The instrument was set for 100 strokes and operation was initiated. The instrument strikes an arc with the abrasive over the test material. Each stroke consists of one motion back and forth over the sample. When the cycles were completed the weighted abrasive was lifted and the test sample removed. At the conclusion of the test the overall quality of each sample was evaluated relatively for scratch resistance. Results indicate that the abrasion resistance of the pressure sensitive adhesive tape of this invention is improved over the comparative tape.

Results obtained were as follows:

	Average	σ (standard deviation)	N (test numbers)
Tensile at Yield at 2.0 in/min, lb/in²			
Inventive Sample Machine Direction	3,176	152	5
Inventive Sample Traverse Direction	3,136	56	5
Comparative Sample Machine Direction	2,400	160	5
Comparative Sample Traverse Direction	1,720	120	5
Tear at 2.0 in/min, lb.			
Inventive Sample Machine Direction	22.3	1.6	5
Inventive Sample Traverse Direction	22.1	0.4	5
Comparative Sample Machine Direction	2.2	0.1	5
Comparative Sample Traverse Direction	1.6	0.1	5
Caliper, mil.			
Inventive Sample With Liner	68.4	0.5	10
Inventive Sample Without Liner	65.4	0.5	10
Comparative Sample	5.5	0.04	10
Adhesion to Stainless lb/in width			

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-continued

	Average	σ (standard deviation)	N (test numbers)
Inventive Sample	5.2	0.5	5
Comparative Sample	1.7	0.03	5
Abrasion Resistance			
Inventive Sample	Excellent - no sign of damage		
Comparative Sample	Fair - moderate damage		

Since certain changes may be made without departing from the scope of the invention herein involved, it is intended that all matter described in the foregoing description, including the examples, shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. An adhesive tape comprising:

a polymer having a Shore A Hardness of between 92 and 100; and

a layer of pressure sensitive adhesive comprising a first side and an opposed second side, the first side being in direct and uninterrupted contact with the polymer layer where the adhesive tape comprises an average thickness between 65 mil and 69 mil.

2. An adhesive tape for application to a flooring environment comprising:

a polymer layer having a thickness between 0.020" and 0.065", the polymer layer defining a first side; and

a double sided adhesive layer where one side of the double sided adhesive layer is in substantially continuous contact with the first side of the polymer layer and an opposing side of the double sided adhesive layer is disposed to adhere to the flooring environment;

where the adhesive tape has a peel adhesion greater than 2.0 lb/in width, measured under a test method including peeling the tape at a 90 degree angle after application to a stainless steel panel.

3. The adhesive tape as set forth in claim 2, wherein the test method further includes peeling the tape at a 90 degree angle after application to a stainless steel panel and allowing a dwell of one hour.

4. The adhesive tape as set forth in claim 2, further comprising a substantially planar floor adhered to the adhesive on the opposing side, where the adhesive tape provides an aisle marking system.

5. An adhesive tape comprising:

a polymer layer having a Shore A Hardness of between 92 and 100 and a substantially uniform thickness of between about 0.020" to 0.065"; and

a layer of adhesive attached to said polymer layer; where the adhesive tape comprises a peel adhesion greater than 2.0 lb/in width when peeled at a 90 degree angle under a modified PSTC-101 method where the modified PSTC-101 method comprises a dwell time of one hour.

6. The adhesive tape of claim 5, further comprising a substrate attached to an outermost side of said layer of adhesive.

7. The adhesive tape claim of claim 5, wherein said polymer layer includes a textured surface.

8. The adhesive tape of claim 5, wherein said polymer layer is comprised of a polyvinyl chloride.

9. The adhesive tape of claim 8, wherein said polyvinyl chloride comprises a clear polymer.

10. The adhesive tape of claim 5, wherein said polymer layer includes coloring pigment.

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11. The adhesive tape of claim **5**, wherein said adhesive comprises a rubberized double-sided tape.

12. The adhesive tape of claim **5**, the adhesive tape claim of claim **1**, wherein said polymer layer has a Shore A Hardness of between about 93 and 97.

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13. The adhesive tape of claim **5**, wherein said adhesive is pressure sensitive,

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 8,088,480 B2
APPLICATION NO. : 10/674108
DATED : January 3, 2012
INVENTOR(S) : Thomas R. Goecke

Page 1 of 1

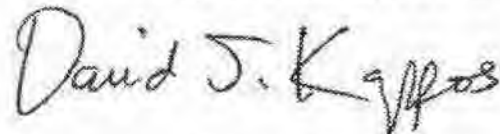
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS:

In Column 5, Lines 3-4, Claim 12, delete "the adhesive tape claim of claim 1," so Claim 12 will read as follows:

12. The adhesive tape of claim 5, wherein said polymer layer has a Shore A Hardness of between about 93 and 97.

Signed and Sealed this
Seventh Day of February, 2012

A handwritten signature in black ink that reads "David J. Kappos". The signature is written in a cursive, flowing style.

David J. Kappos
Director of the United States Patent and Trademark Office



US008088480C1

(12) **EX PARTE REEXAMINATION CERTIFICATE** (9969th)
United States Patent
Goecke

(10) **Number:** **US 8,088,480 C1**
 (45) **Certificate Issued:** **Dec. 3, 2013**

(54) **ADHESIVE TAPE**

(75) **Inventor:** **Thomas R. Goecke**, Rocky River, OH
 (US)

(73) **Assignee:** **Shieldmark, Inc.**, Rocky River, OH
 (US)

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Reexamination Certificate for:

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Certificate of Correction issued Feb. 7, 2012

(51) **Int. Cl.**
D06N 7/04 (2006.01)
C09J 7/02 (2006.01)
B32B 7/12 (2006.01)

(52) **U.S. Cl.**

CPC **C09J 7/0264** (2013.01); **C09J 7/0278**
 (2013.01); **C09J 2427/006** (2013.01); **Y10S**
428/906 (2013.01)
 USPC **428/343**; 428/141; 428/332; 428/337;
 428/906

(58) **Field of Classification Search**

None
 See application file for complete search history.

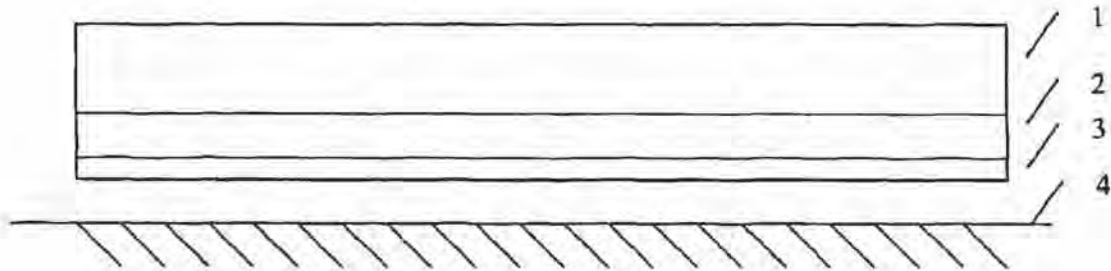
(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/012,670, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

Primary Examiner — Ling Xu

(57) **ABSTRACT**

The adhesive tape of this application comprises a layer of polymeric material, particularly a polyvinyl chloride, having a Shore A Hardness of between 92 and 100 and a layer of adhesive material attached to a surface of the layer of polymeric material.



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EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307

5

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

AS A RESULT OF REEXAMINATION, IT HAS BEEN
DETERMINED THAT:

10

The patentability of claims **1** and **4-13** is confirmed.
Claims **2-3** are cancelled.

* * * * *